

**EXAMINING INVESTIGATIVE INTERVIEWS WITH
TRAUMATIZED WITNESSES IN THE EXTRAORDINARY
CHAMBERS IN THE COURTS OF CAMBODIA**

Thesis

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CONTENTS

ACKNOWLEDGEMENTS	- I -
ABSTRACT	- VI -
TABLES	- VIII -
ABBREVIATIONS	- I -
1 INTRODUCTION.....	- 1 -
2 THEORETICAL BACKGROUND.....	- 3 -
2.1 THE INVESTIGATIVE INTERVIEW IN COURT.....	- 3 -
2.1.1 Definition of the investigative interview.....	- 3 -
2.1.2 Distinction between investigative interview and interrogation.....	- 3 -
2.1.3 Psychological factors influencing accuracy and completeness of witnesses’ accounts.....	- 4 -
2.1.3.1 Factors relating to the interviewer	- 4 -
2.1.3.2 Factors relating to the interview	- 7 -
2.1.3.3 Factors relating to the interviewee.....	- 8 -
2.2 VULNERABLE WITNESSES	- 11 -
2.2.1 Mental disorder	- 11 -
2.2.2 Abnormal mental state	- 12 -
2.2.3 Intellectual abilities	- 12 -
2.2.4 Personality characteristics	- 12 -
2.3 WITNESSES’ CREDIBILITY	- 13 -
2.4 WITNESSES IN INTERNATIONAL CRIMINAL TRIALS	- 15 -
2.5 POSTTRAUMATIC STRESS DISORDER	- 15 -
2.5.1 Clinical picture	- 16 -
2.5.2 Trauma and memory	- 17 -
2.5.3 Posttraumatic stress disorder in Cambodia	- 19 -
2.5.3.1 Impacts of culture on psychological well-being and the development of posttraumatic stress disorder	- 20 -
2.6 TRAUMA RELATED DISORDERS BESIDES POSTTRAUMATIC STRESS DISORDERS.....	- 21 -
2.6.1 Depression.....	- 22 -
2.6.2 Other posttraumatic outcomes.....	- 23 -

2.7	HISTORICAL AND POLITICAL BACKGROUND TO TODAY'S CAMBODIA .-	24
2.7.1	The rise and fall of the Khmer Rouge Regime	24 -
2.8	THE EXTRAORDINARY CHAMBERS IN THE COURTS OF CAMBODIA	26 -
2.8.1	Establishment	26 -
2.8.2	The organizational and legal framework.....	26 -
2.8.3	Case 001	27 -
2.8.3.1	Examination of witnesses in Case 001	28 -
2.8.4	Case 002	28 -
2.9	METHODOLOGICAL ASPECTS OF RESEARCH ON INTERVIEWS WITH TRAUMATIZED WITNESSES	29 -
2.9.1	Experimental studies	29 -
2.9.2	Field studies	30 -
2.9.2.1	Linguistic analyses	31 -
2.10	CONCLUSIONS	35 -
3	EMPIRICAL STUDIES	40 -
3.1	WITNESS ACCOUNTS ARE RELATED TO THE DIFFERENT INTERVIEWERS – RESULTS FROM THE KHMER ROUGE TRIALS	40 -
3.2	LINGUISTIC FEATURES OF RAPPORT BUILDING IN LEGAL INTERVIEWS – RESULTS FROM THE KHMER ROUGE TRIALS	40 -
3.2.1	Introduction	40 -
3.2.2	Method	45 -
3.2.2.1	Linguistic Inquiry and Word Count.....	45 -
3.2.2.2	Measures of communication patterns	46 -
3.2.2.3	Assessment of speech samples and description of subjects	48 -
3.2.2.4	Statistical analysis.....	49 -
3.2.3	Results	50 -
3.2.3.1	Verbal utterances of different parties to the proceedings	50 -
3.2.3.2	Verbal rapport building	51 -
3.2.3.3	Social distancing.....	52 -
3.2.4	Discussion	53 -
3.2.4.1	Verbal rapport building	53 -
3.2.4.2	Social distancing	54 -
3.2.4.3	Association between interviewers' word use and witness accounts.....	56 -

3.2.4.4	Limitations.....	- 56 -
3.2.4.5	Conclusion.....	- 57 -
4	GENERAL DISCUSSION.....	- 59 -
4.1	SUMMARY OF THE RESULTS	- 59 -
4.1.1	Witness accounts are related to the different interviewers – Results from the Khmer Rouge Trials.....	- 59 -
4.1.2	Linguistic features of rapport building in legal interviews – Results from the Khmer Rouge trials	- 60 -
4.2	INTEGRATION OF THE CURRENT FINDINGS.....	- 61 -
4.3	STRENGTHS AND LIMITATIONS OF THE EMPIRICAL STUDIES	- 67 -
4.4	CONCLUSIONS AND DIRECTIONS FOR FUTURE STUDIES.....	- 68 -
5	BIBLIOGRAPHY	- 71 -

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ABSTRACT

Testimonies of witnesses have proven to be central in international criminal trials as they provide judges and juries with evidence that will influence their decisions about convicting or acquitting of defendants. The way in which the investigator interviews witnesses and how they respond have an important influence on the quality of the information retrieved. Testifying witnesses in the Extraordinary Chambers in the Courts of Cambodia (ECCC) give their account about massive war crime atrocities they have experienced. Such traumatized witnesses must be interviewed with delicacy as the sequelae of trauma can have profound effects on the ability to testify. The present thesis aimed to draw attention to fundamental issues and problems that can arise in the context of investigative interviewing. In the empirical studies undertaken, we investigated if interviewers verbally build rapport to these vulnerable witnesses and thereby help them to feel less distressed, or if they socially distance themselves from witnesses. A further purpose was to prove if witnesses differ in their testimonies depending on the interviewing persons and their legal roles.

EMPIRICAL STUDY I

Through an investigation of the linguistic experience of witnesses in the Extraordinary Chambers in the Courts of Cambodia (ECCC), this study considers how investigative interviews by different parties to the proceedings (namely judges, prosecutors, civil party lawyers and defense lawyers), as well as the gender and nationality of interviewers, can influence the testimony of witnesses in court who share comparable traumatic experiences. Transcribed testimonies of 24 victim witnesses and civil parties which were translated from Khmer into English were analyzed using a computer-based text analysis program, the Linguistic Inquiry and Word Count (LIWC). Results showed that when answering questions by females, witnesses used significantly more cognitive process words. When interviewed by international rather than by Cambodian parties to the proceeding witness accounts were composed of significantly more verbal expressions of affective processes and of perceptual processes. Furthermore, witnesses used most cognitive and affective process words during the interview by civil party lawyers and defense lawyers. These results may be due to a prior supportive relationship between civil parties and their lawyers and due to a more interrogative question style by the defense lawyers, who attempt to undermine the credibility of the interviewed witnesses. Data shows that LIWC analysis is an appropriate method to examine

witness accounts and, therefore, contributes to a better understanding of the complex relationship between testimony in events under litigation and credibility.

EMPIRICAL STUDY II

Despite a large number of scientific studies conducted on legal interviews with witnesses, with a particular focus on questioning techniques and question typologies, little is known about the communicative behaviors of interviewers and word use in questions being asked in court. Therefore, the second empirical study explores aspects of the investigative interviews in trial 001 in the ECCC. In particular, it has been examined how different interviewers differ in communication patterns in terms of verbal rapport building and social distancing according to the LIWC. Statistical evaluations of speech samples of 26 interviewers show that different parties to the proceedings (judges, prosecutors, civil party lawyer, or defense) differ in their communication patterns respectively in their use of words that are related to verbal rapport building and social distancing to the witness.

To the best of the author's knowledge, this work is the first field study that analyzes investigative interviews with traumatized witnesses in an international criminal trial from a linguistic perspective with an innovative computerized content analytic approach.

TABLES

Table 1	DSM-IV criteria for post-traumatic stress disorder (309.81)	- 17 -
Table 2	Four different approaches to qualitative research	- 32 -
Table 3:	LIWC2007 categories related to verbal rapport building and social distancing, abbreviation and examples (according to Pennebaker et al. 2007)	- 48 -
Table 4	Differences in linguistic variables related to parties to the proceedings (according to the analysis of the linguistic inquiry and word count)	- 50 -

ABBREVIATIONS

APA	American Psychiatric Association
CA	Conversation analysis
ANOVA	Analysis of Variance
CPK	Communist party of Kampuchea
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association
ECCC	Extraordinary Chambers in the Courts of Cambodia
ICTY	International Criminal Tribunal for the former Yugoslavia
IMT	International Military Tribunal at Nuremberg
LIWC	Linguistic Inquiry and Word Count
NCS	National Comorbidity Survey
PTSD	Posttraumatic stress disorder
TPO	Transcultural Psychosocial Organization
TJ	Testimony given to judges
TP	Testimony given to prosecutors
TC	Testimony given to civil party lawyers
TD	Testimony given to defense counsel

1 INTRODUCTION

Investigative interviews are central and significant aspects of the criminal justice process (Oxburgh, Myklebust, & Grant, 2010). Their purpose is to gather information and factual accounts from interviewees. Research shows that jurors rely heavily on witness accounts to determine whether to convict or acquit (Cutler, Penrod, & Dexter, 1990), and their decisions are more accurate about convicting or acquitting defendants if they are presented with more detailed and accurate evidence of witnesses (Kebbel & Johnson, 2000). Consequently, it is imperative that witnesses provide accurate and detailed accounts of the witnessed events. However, research into false convictions shows that one of the most frequent reasons for a false conviction is erroneous witness evidence (Connors, Lundregan, Miller, & McEwen, 1996).

In court, there are certain factors impacting on a witness's ability to give accurate testimony which are not under the control of the criminal justice system; among them factors relating to the characteristics of a crime, such as how long ago a crime occurred and how long it lasted (Kebbell & Wagstaff, 1999). However, a number of factors that affect the accuracy and reliability of witnesses' accounts can be influenced by the legal system to a certain degree. These include psychological, social, and communication factors, like for example the way a witness is interviewed. Numerous recommendations on these psychological and procedural aspects in investigations of witnesses have arisen from psychological research literature. According to Powel, Fisher and Wright (2005), the factors that ultimately determine the quality of an investigative interview can be conceptualized broadly as factors relating to the interviewee, to the interview context, and factors relating to the interviewer. Investigative interviewers need to have a broad array of skills and competencies (Smith, Powell & Lum, 2009), including the ability to not be biased, to ask open information-seeking questions, and the ability and willingness to build rapport, especially when interviewing vulnerable traumatized witnesses. Furthermore, they have to consider the impact of the criminal event the witnesses have experienced as well as witnesses' physical, mental, and emotional state (Powell et al., 2005; Yuille, Marxsen, & Cooper, 1999). Although traumatized victims represent a large proportion of witnesses in international criminal trials, in the past there has been only a scarcity of research on how they are actually interviewed in these trials and on what is the best way to interview them. Yet, traumatized witnesses face particular difficulties within the criminal trial process stemming from psychological reactions to trauma, which can

impair witnesses' ability to recollect and talk about the criminal events they have witnessed (Herlihy & Turner 2009). This inability to testify effectively can be made worse by the fact that they may be interviewed by unskilled and unempathic interviewers. The problems that these witnesses exhibit in court may contribute to their testimonies being inconsistent and incoherent and therefore being found unreliable or not credible.

In this thesis, the focus is laid on the investigative interview with traumatized witnesses in an international criminal trial, namely in the Extraordinary Chambers in the Courts of Cambodia (ECCC). The empirical studies undertaken investigate, on the one hand, how interviewers differ in how they verbally build rapport or how they socially distance themselves from traumatized witnesses at the ECCC (Chapter 3.2). On the other hand, it was examined how different interviewers influence witness accounts and how witnesses differ in their testimonies depending of the interviewing party to the proceedings (Chapter 3.1). The theoretical background of the empirical studies is presented in chapter 2. It starts with chapter 2.1, in which a definition of the investigative interview is presented, and psychological factors affecting the quality of such an interview are described. Because especially vulnerable witnesses run the risk of providing perceived inaccurate testimonies, chapter 2.2 gives an overview of who can be categorized as vulnerable, including witnesses suffering from mental disease such as posttraumatic stress disorder and/or major depression. Chapter 2.5 and 2.6 provide insight into the clinical picture of these disorders, their prevalence rates in post war Cambodia, as well as into how trauma affects memory and thus the ability to testify. Because the data used in our investigation derive from the court proceedings at the Extraordinary Chamber in the Courts of Cambodia (ECCC) dealing with war crimes committed by the Khmer Rouge, in chapter 2.7 the historical and political background of today's Cambodia as well as the institution of the ECCC (Chapter 2.8) are explained. Chapter 2.9 gives an overview on methodological issues related to research on investigative interviews and particularly focuses on the examination of real word behavior in the field. Finally, a summary of the theoretical background as well as the study ideas and hypotheses are presented (Chapter 2.10).

After presenting the empirical studies in Chapter 3.1 and 3.2, the results are discussed in more detail in the general discussion (Chapter 4).

2 THEORETICAL BACKGROUND

Three large subject areas are integrated in this thesis, namely the investigative interview in court, the vulnerable witness testifying in international criminal trials, who may suffer from a mental disease, such as posttraumatic stress disorder and/or other posttraumatic outcomes, and the Extraordinary Chambers in the Courts of Cambodia (ECCC).

2.1 THE INVESTIGATIVE INTERVIEW IN COURT

2.1.1 Definition of the investigative interview

The term “investigative interviewing” is used to describe the questioning of victims, witnesses and suspects (Gudjonsson, 1992; Ord, Shaw & Green, 2004). Investigative interviews are conducted at several stages of the investigative process, ranging from police interviews to in-court interviews by lawyers and other law personnel (Powell et al., 2005). Their overall objective is to obtain a narrative of what was observed in order to gather information about the crime details (e.g., what and when a crime occurred, how the crime was accomplished, and why the crime was perpetrated) that is as accurate and complete as possible (Gudjonsson, 1992). Besides obtaining the maximum amount and quality of information from the witness, investigative interviews should minimize contamination of the witness’ memory of the event(s), should function within the mandate of the organization that is conducting the interview, and should achieve the above in a way that minimizes any negative emotional impact on the witness (Yuille et al., 1999). Generally, in interviews with professionals (e.g., doctors and other health professionals) the interviewer usually knows more about the topic than does the interviewee. The investigative interview, therefore, is unique, in that its goal is to minimize the interviewers’ input and to encourage the witness to tell everything he¹ knows about an event, about which the interviewer himself knows very little (Powell et al., 2005).

2.1.2 Distinction between investigative interview and interrogation

The terms “investigative interviewing” and “interrogation” are often used interchangeably, although there are important distinctions between the two. Characteristics of the interview are

¹ In the interests of readability, the masculine form has generally been used throughout, although both sexes are accorded equal importance.

that it is not accusatory, and that its purpose is to gather information, whereas interrogations are accusatory and involve active persuasion (e.g., the investigator believes that the suspect has not told the truth), and their purpose is to learn the truth (for an overview of the distinction criteria, see Inbau, Reid, Buckley, & Jane, 2011).

2.1.3 Psychological factors influencing accuracy and completeness of witnesses' accounts

Thousands of studies have examined both the strengths and weaknesses of witness memory in legal investigations, yet few researchers have offered other than general suggestions on how witnesses should be interviewed. Results in the research literature about the most appropriate strategy, the best outcome methods to utilize, and the characteristics of both interviewers and interviewees that elicit more useful information are therefore relatively inconsistent (Forrester, McMahon & Greenwood, 2001). Furthermore, according to McMahon (2000) the research literature concentrates on interviews performed by police with witnesses, victims, or suspects and contributes to a lesser extent to interviews held in court.

Powell et al. (2005) describe the task to elicit reliable and detailed information from a witness as a complex process that is determined by a wide range of interrelated factors, which can be conceptualized broadly as factors relating to the interviewer, to the interview context, and factors relating to the interviewee.

2.1.3.1 Factors relating to the interviewer

Interviewers determine the probability of disclosure, and, thereby, the discovery of truth and outcome of trials. An interviewer has the power to elicit false allegations (Bruck & Ceci, 1995; Wood & Garven, 2000), to determine accuracy and completeness of witness recall (Davies, Westcott, & Horan, 2000; Lamb & Garretson, 2003), and to prevent the victim from disclosing altogether (Wood & Garven, 2000).

Besides a broad array of skills and competencies (Smith et al., 2009), the interviewer's attitude, beliefs, and presumptions can have an influence on the way he actually conducts the interview (Holmberg, 2009). If, for example, an interviewer is biased towards the guilt of a witness or a suspect, he may not be capable of conducting an objective information-gathering interview but more possibly interviews the interviewee in a guilt-presumptive manner. When people have formed a belief, they become selective when seeking new information (Kassin,

Goldstein, & Savitsky, 2003) and strive for information to verify their belief. This process of cognitive confirmation bias can make an investigator's beliefs resistant to change, even in the presence of contradictory facts (Nickerson, 1998). Kassin et al. (2003) could show in an experimental study that when interviewers adopted a presumption of guilt rather than innocence, they used more techniques and pressure to elicit a confession and asked more guilt-oriented questions. Besides the interviewer's willingness to explore alternative hypotheses and a good rapport between the interviewer and the interviewee, most of the distinct interviewing protocols currently used by investigative interviewers therefore emphasize the importance of the question style (Powell et al., 2005).

2.1.3.1.1 Questioning techniques

Eliciting elaborate responses from witnesses strongly depends on wording and type of the questions an interviewer asks (Baron & Byrne, 2000; Loftus, 1996). Interviewers must be aware that even subtle changes in the wording of a question (e.g., *a* versus *the*) can have strong effects on witnesses' answers (Loftus & Zanni, 1975). Language has been identified as the "primary manipulative tool" at the disposal of lawyers in court (Eades, 1995). Courtroom interaction is, namely, a highly restricted form of interaction (Eades, 2010). Hearings in courts involve verbal exchanges that differ from ordinary talk and everyday language (Atkinson & Drew, 1979). In court, the story of the witness has to be told in very short episodes, segmented and structured by questions of different law-enforcement personnel. The witnesses are often not allowed to tell their experiences in their own words but are forced into a co-construction with the interviewer. This co-construction is seen through the choice of words that are used in questions, the topics which are linked and introduced, and the ordering of them (Eades, 2008). As Atkinson and Drew (1979) pointed out, talk in examination is organized into series of "questions" and "answer" pairs. Through the act of questioning the examiner thus controls the way in which the verbal interaction continues and also "defines the relationship between interviewer and interviewee along a dimension of power and authority" (Harris, 1984, p. 7). The conversation is therefore artificial in that it is uni-directional, effectively preventing the witness from participating in a meaningful way in anything but the smallest point of clarification on the most immediate question.

It is widely agreed by academic researchers that the most useful information obtained in any investigative interview is that which is given in a free narrative response (Milne & Bull, 1999). This can be best achieved when interviewers use open, information-seeking questions.

Open questions refer to questions that require multiple-word responses and allow witnesses the flexibility to choose which aspects of the event they will describe. Open questions yield more consistent responses and also more accurate answers than closed questions (Fisher & Patterson, 2004). Questions that most negatively affect accuracy and completeness of witness reports include (see Oxburgh, Myklebust & Grant, 2010, for a review on question styles in investigative interviews):

1.) *Leading questions*

Questions that suggest or imply a desired answer to a question asked by the interviewer.

2.) *Multiple questions*

Questions that comprise a number of sub-questions asked all at once and function to confuse.

3.) *Forced-choice*

Questions that only offer the interviewees a limited number of possible responses none of which may be the interviewees' preferred answer.

4.) *Opinion/statements*

They involve putting a statement to an interviewee rather than asking a question.

2.1.3.1.2 Rapport

Establishing rapport with a witness is important in order to help the witness to become comfortable with the interview context (Yuille et al., 1999), and the more at ease the interviewee feels the more compliant and cooperative he will be. This in turn has a positive influence on memory retrieval and therefore maximizes informativeness (Collins, Lincoln & Frank, 2002). Especially when the topic is traumatic, witnesses report that their principal concerns is to feel heard, understood, and believed by the interviewer (Powell et al., 2005). Although an investigative interview is not designed to be therapeutic, testifying as an interviewee requires the development of a trusting relationship in which the interviewee knows that his story will be heard, accepted, and not judged. From a therapeutic jurisprudential perspective, rapport emphasizes the social and psychological well-being of the individual involved in a juridical action (Wexler, 1996).

Yet, even though rapport is considered a crucial component in successful investigative interviews, there is little empirical research on what exactly constitutes rapport. Milne and Bull (1999) stressed that the necessities for rapport building are attention and active listening, while Fisher and Geiselman (1992) emphasized the importance of personalizing the interview

and showing empathy. Collins et al. (2002) experimentally investigated the results of three interviewer-attitude conditions: (1) rapport, (2) abrupt, and (3) neutral. In the rapport condition the interviewer spoke with a gentler tone, referred to the participants by name, adopted a more relaxed body posture, and generally was friendlier. In the abrupt mode, on the other hand, the interviewer spoke with a staccato harsher tone, did not refer to the participant by name, maintained a stiff body posture, and was generally uninterested in anything but conducting the experiment. In the neutral condition, the interviewer behaved as neutral as possible. The experiment showed that participants in the rapport condition freely recalled more accurate information about a videotaped real-life stimulus event than participants in the neutral and the abrupt condition. In a more recent experimental study by Vallano and Schreiber Compo (2011), verbal rapport building involved a uni-directional rapport building condition, where the interviewer invited the witness to self-disclose personal information (without interviewer self-disclosure) and a bi-directional rapport building condition (the interviewer invited witness self-disclosure while also disclosing personal information himself). The researchers did not find additional witness recall benefits in the uni-directional condition when compared to only interviewee self-disclosure. However, participants in the condition where interviewers disclosed personal information perceived the interviewer as friendlier than participants in a no-rapport condition, indicating a more subjective rather than an objective benefit of self-disclosure.

2.1.3.2 Factors relating to the interview

Factors relating to the interview are purpose of the interview and interview setting (Powell et al., 2005). In general, an interview in court will always be an unnatural setting, and the investigative interview procedure is alien to most witnesses. However, the location of the investigative interview is important because it can affect the relationship that is established between interviewer and interviewee. Research literature on contextual factors related to the interview setting gives suggestions on how detrimental influences of contextual factors can be decreased in police interviews with witnesses, victims, or suspects. According to Vessel (1998), for example, officers should only conduct interviews when they can guarantee privacy and maintain control of the environment and when the setting is a small, sound-insulated room devoid of distractions. However, testifying in the context of “ordinary” criminal cases in the domestic realm can already strongly infringe privacy, and giving account as a witness in international criminal trials is far away from disclosing in small and distraction-free contexts. Specifically in relation to traumatized witnesses, it is vital to keep in mind how giving

testimony in open courts with many people involved is associated with high distress and anxiety. Common sources of stress experienced by such witnesses include being in the presence of the defendant, having to speak publicly, particularly about sexual matters, and the formality of the courtroom environment (Ellison, 2001). Some courts, therefore, agreed to impose a number of protective measures, such as closing the courtroom to journalists and members of the public, to ensure the safety and well-being of witnesses (Beresford, 2005).

Other factors influencing court interaction are the different legal traditions and practices implemented. There are two principal forms of legal procedure. These are the adversary procedure, which is used in countries where legal systems are derived from English common law, and the contemporary continental inquisitorial procedure, which is used in varying forms in continental European countries. In these procedures witnesses are accommodated differently (Brants, 2011).

In the inquisitorial procedures, the presiding judge actively steers the search for evidence and also questions the witnesses himself. Lawyers play a more passive role. Following the judge's investigative interview, the prosecutors and defense counsel are permitted to ask clarifying questions. Their questioning of witnesses is therefore often brief ("Inquisitorial system", 2008).

The adversary system, however, operates on the fundamental belief that the best way to ascertain the truth is to permit two or more opposing parties to do their best to prove their competing version of the facts. At the trial, the party who calls the witness attempts to elicit witness information favorable to its side. Thereafter, the witness is subjected to the cross-examination by the opposing party (Sheppard & Vidmar, 1980; Brants, 2011). Research identified several strategies in cross-examination to impress upon judges or jurors a particular version of the "facts" (as for example using question formats that can limit the completeness and accuracy of answers) and revealed the extent to which cross-examination is used as a tool to humiliate, intimidate, and confuse opposing witnesses (Ellison, 2001).

2.1.3.3 Factors relating to the interviewee

Interviewers frequently have no or little other investigative relevant information than the information and evidence of the witnesses. Ideally, all witnesses would be articulate and easily able to provide a coherent, reliable, and accurate account. Unfortunately, this is usually not the case. Characteristics of the interviewees that affect the investigative interview are,

inter alia, the physical, mental, and emotional state of the interviewee at the time of the event and the interview, personality, motives, culture, perceived social barriers towards the interviewer, the role the witness played in the event (e.g., participant or observer), as well as the impact of the event (Powell et al., 2005; Yuille et al., 1999). Due to their relevance in this work, following aspects will be discussed in greater detail: Culture, perceived social barriers towards the interviewer, impact of the event, and mental and emotional state of the interviewee. Some of these aspects, like for example abnormal mental and emotional states during an interview, can place witnesses at a high disadvantage in terms of coping with the demand characteristics and stress of the interview and in terms of providing the investigators with salient, detailed, accurate, and coherent answers to questions (Gudjonsson, 2010). What constitute these vulnerable witnesses will be explained in a separate chapter (chapter 2.2).

2.1.3.3.1 Culture

Culture can play a vital role in how a witness responds in an interview (Yuille et al., 1999; Eades, 2010). For example, if the witness comes from a culture in which personal feelings are considered a highly private matter (as it is the case in Cambodia), he may amplify aspects of his testimony, not to mislead the interviewer but to meet a cultural expectation. He may be reluctant to disclose details and to show an open expression of strong affect depending upon his culture of origin. Kaufmann, Drevland, Wessel, Overskeid & Magnusson (2003) recently showed in an experimental study that emotions displayed during testimony can be a strong determinant of the perceived credibility of a witness as well as of the estimated probability of guilt. When the victim (a professional actress) displayed neutral or incongruent emotion during her testimony about a rape scenario, participants judged her as less credible. Therefore, in court, a “typical” emotional presentation is expected which has “emotional congruence” with the alleged crimes. If the witness shows little emotion or numbness – which in fact is a feature of posttraumatic stress disorder (PTSD) – then he may be less likely to be believed as credible. Therefore, any interpretation of a witness’ behavior and emotions must be made with the knowledge of the culture and mental state of the witness.

2.1.3.3.2 Perceived social barriers towards the interviewer

Interpersonal variables can influence the investigative interview as well. For example, witnesses interviewed by higher status individuals produce longer recall reports compared to when interviewed by lower status individuals, although there is not necessarily a corresponding increase in accuracy and completeness (Loftus, 1996). Authority figures can

cause anxiety and uneasiness in witnesses. They therefore may be overly pressured to comply with the interviewer. Compliance can be related to an eagerness to please and/or to an avoidance of conflict and confrontation as a way of relieving distress (Gudjonsson, 1992; 2006). Furthermore, witnesses are more susceptible to leading when the interviewer is of higher than of lower status (Roper & Shewan, 2002). As the social distance between an interviewer and witness decreases (e.g., by a decrease in the formality), the impact of such biases is significantly reduced (King & Yuille, 1987).

2.1.3.3.3 Impact of the event

An event may vary in how it impacts a witness from trivial to traumatic (see chapter 2.5.1, for the definition of trauma). Traumatic events can affect a witness' memory respectively the encoding, storage, and decoding/recall of the memory process differently than relatively unafflicting witnessed events. Studies on arousal and memory indicated that higher levels of arousal facilitate memory formation and are beneficial to storage (Jeong & Biocca, 2012). A too high level of physiological and psychological activation, however, can impact adversely on memory, which in turn reduces quality and quantity of witness testimony (see Chapter 2.5.2).

2.1.3.3.4 Mental and emotional state of the interviewee

Victims do not always possess good memories nor are they all psychologically healthy after the crime. They can be traumatized and therefore have poor memories. Experiencing or witnessing such traumatic events as for example sexual abuse, domestic violence, mass violence, and war crimes can seriously influence a witness' mental and emotional state, which may impair their ability to cope satisfactorily with the investigative interview. Gudjonsson (2006) termed such witnesses therefore as "psychological vulnerable". However, not only witnesses in an abnormal mental and emotional state belong to the vulnerable witness group, but there is also an array of other criteria defining vulnerable witnesses. The definition of a "vulnerable witness" and the four different types of psychological vulnerabilities are described in the following. It is likely that all these features can be met by witnesses testifying at the ECCC.

2.2 VULNERABLE WITNESSES

Vulnerabilities of interviewees can have an impact on their credibility during investigative interviews. However, with regard to witnesses in investigative procedures, no international agreed definition of the word “vulnerable” does exist (Bull, 2010). Several researchers focused on vulnerable groups, such as children, cultural minority groups, and those with learning disabilities, and did not provide a generic definition of the term. However, Gudjonsson (2006, 2010) uses the term to describe the range of psychological characteristics or mental states that are risk factors of providing inaccurate or unreliable information. The forms of psychological vulnerability shown by witnesses can be typically categorized into four different types. These are labeled “mental disorder”, “abnormal mental state”, “intellectual functioning”, and “personality” (Gudjonsson, 2006, 2010). These vulnerabilities are important in investigative interviews, because they may place witnesses, victims, and suspects at a disadvantage in terms of coping with the demand characteristics and stress of the interview as well as in terms of providing the investigators with salient, detailed, accurate, and coherent answers to questions.

2.2.1 Mental disorder

Although vulnerable witnesses may be motivated to give an open and honest account of what has happened, in certain cases they may be unable to give a clear and coherent account of it, because they may be adversely affected in their thought, mood, perception, orientation, or memory by a mental disorder. Witnesses suffering from PTSD as a consequence of experiencing terrifying traumatic events, for example, can have impaired memory of these events. Besides, also witnesses with learning disability can have difficulties in remembering the material event clearly. These persons are typically reported as slower than normal developing adults to encode, store, and retrieve details of an event (Milne & Bull, 2001). However, mentally disordered people are not always recognized as such at the time they are interviewed by investigative interviewers and even when they are, the courts may not be familiar with the kind of factors that may undermine the reliability of their accounts. Furthermore, law personnel receive virtually no psychological trainings in how to deal with the needs and issues related to such witnesses.

2.2.2 Abnormal mental state

Witnesses, without having had a history of mental disorder, can suffer from abnormal mental states, which in turn can negatively influence the reliability of their testimony. Although nearly all victims of a serious crime suffer some degree of stress, some witnesses may experience particular high levels of anxiety and arousal during the investigative interview, which in turn can impair their perceptual and retentive faculties (Siegel & Loftus, 1978). Others may be in state of bereavement or may be under the influence of drugs or alcohol when being interviewed, showing unique patterns of memory impairment that require specific attention from the legal community (Smith & Tilney, 2007).

2.2.3 Intellectual abilities

Impaired intellectual functioning can influence the ability of a witness to understand questions and to articulate their answers (Gudjonsson, 2006). In a study by the Berlin Center for the Treatment of Torture Victims (Stammel, Burchert, Taing, Bockers, & Knaevelsrud, 2010), among 1077 Cambodians who had applied to become civil parties before the Extraordinary Chambers in the Courts of Cambodia (ECCC), about two thirds of the participants indicated that they can only read or write a little bit and that they spent on average four years in school. Legal professionals must certainly take into account such education issues when conducting their interviews by, for example, using a clearer and a more simple language.

2.2.4 Personality characteristics

Some personality characteristics have been described to play an important role when evaluating the reliability of witnesses' testimonies. The three best investigated variables are interrogative suggestibility, compliance, and acquiescence. The term 'suggestibility' relates to "the degree to which an interviewee's encoding, storage, retrieval and/or reporting of events can be influenced by a range of social and psychological factors associated with the interview process" (Milne & Bull, 1999, p. 91). Interrogative suggestibility appears to be positively correlated with both state and trait anxiety and neuroticism (Wolfradt & Meyer, 1998), meaning that more anxious and neurotic witnesses tend to yield to leading questions and submit to interrogative pressure more easily. Furthermore, interrogative suggestibility is influenced by negative life-events and by propensity for dissociative experiences: Interviewees with a high number of negative life-events are more prone to shifting their initial answers in response to interrogative pressure compared to interviewees with fewer negative

life-events (Drake, Bull, & Boon, 2008), and persons with a strong propensity for dissociative experiences are more vulnerable to accept misleading information than persons without this trait (Merckelbach, Muris, Rassin, & Horselenberg, 2000).

The concept of “compliance” to some extent overlaps with suggestibility but is stronger associated with eagerness to please and the willingness to avoid conflict and confrontation (Gudjonsson, 2006). McCrae and Costa (2008, p. 164) describe compliance as “a willingness to defer to other during interpersonal conflict” and identified it as the specific trait that defines agreeableness, one robust factor in the famous five-factor model of personality. “Acquiescence” refers to the tendency of witnesses to answer questions in the affirmative irrespective of content. A reason for this seems to be that witnesses answer questions without fully understanding them (Gudjonsson, 2006).

To conclude, vulnerable interviewees in court may face particular problems in being believed. Psychological disorders, abnormal mental states when being interviewed, intellectual disabilities, and personality characteristics, such as being suggestible, may have a negative impact on accuracy and coherence of witnesses’ testimonies. However, the questioning of vulnerable witnesses in court is almost identical to that of witnesses from the general population, and lawyers generally do not alter their questioning behavior for vulnerable witnesses (Kebbell, Muris, Rasin, & Horselenberg, 2004). Possible resulting inaccurate and incoherent answers, in turn, can seriously decrease witnesses’ credibility. Although these witnesses may be perfectly willing to tell the truth, they may not be believed. The next chapter gives insight into the challenges of evaluating the credibility of witnesses who testify in court.

2.3 WITNESSES’ CREDIBILITY

Lawyers and judges are required to assess the credibility of witnesses and to make fair and accurate decisions based on their evidence concerning guilt and innocence. However, evidence provided by witnesses is influenced by a high number of variables, and it is therefore often the case that the “truth” of witnesses’ testimonies cannot be fully established. There are no procedures to guarantee error-free fact-finding (Potter & Brewer, 1999). Lawyers and judges therefore have to rely on their perceived credibility of witnesses and reliability or accuracy of the testimonies. According to Gudjonsson (2010), the evaluation and determination of the credibility of victims, witnesses, and suspects is one of the most challenging tasks facing the criminal justice system. Unfortunately, research has suggested

that legal professionals are not optimally suited for this task (Ask & Granhag, 2007), with errors occurring in about 45% of credibility assessments (e.g., Bond & DePaulo, 2006; Vrij, 2000). As documented by a number of expert surveys, legal professionals hold beliefs regarding witness psychology that are not in line with findings in the scientific literature (Brigham & Wolfskiel, 1983; Granhag, Strömwall, & Hartwig, 2005) and are highly subjective in their interpretation of witness information, which allows for the influence of various biases (Ask & Granhag, 2007). Judges and litigators, for example, deem witness consistency to be one of the most important measures of witness credibility. Brewer and colleagues surveyed a variety of people, including police, prosecutors, and defense attorneys, about their beliefs of the diagnostic value of inconsistency on witness credibility (Brewer, Potter, Fisher, Bond & Luszcz, 1999; Potter & Brewer, 1999) and found that inconsistencies within a witness' testimony were considered by all of these groups to be strongly indicative of inaccurate testimony. Highlighting or eliciting inconsistencies in a witness' statement therefore seems to be an effective mean of discrediting the witness. As a result, defense lawyers not only search through witnesses' previous statements to find inconsistencies, but they also question witnesses in such a way as to create such inconsistencies (Iannuzzi, 1999). Varying the format of the question asked, for example, has effects on consistency: Open-ended questions yield more consistent responses than closed questions (Fisher & Patterson, 2004). Psychologists have cautioned legal decision makers on the significance attached to inconsistency in credibility assessment. The basic notion that inconsistency implies inaccurate testimony or deception is based on an erroneous view of memory working passively, comparable to a video recorder – witnesses are able to simply “play back” information exactly the way it was “recorded” (Putwain & Sammons, 2008). In reality, memory research supports the variability of a person's memories of autobiographical details on retelling. Even when people are trying to recall the same memory, the content can change substantially from one situation to another (Anderson, Cohen & Taylor, 2002). In addition, research suggests that the normal variability of memory can be further exacerbated by the impact of traumatic experiences (see Chapter 2.5.2).

However, although legal professionals can lack scientifically based relevant psychological knowledge and are sometimes biased in their evaluation and determination of the witness' credibility, in some cases trial judges are not even required to give reasons why they decide one way and not the other on credibility (Morrison & Comeau, 2002).

The next chapters consider vulnerable witness testifying in international criminal trials. As the majority of such witnesses were exposed to extreme traumatic stressors, such as genocide and war crimes, they frequently suffer from mental diseases, such as for example posttraumatic stress disorder (PTSD) and depression. Chapter 2.5 comprises prevalence and clinical picture of PTSD in general, as well as memory in PTSD. Furthermore, as with regard to witnesses testifying in the ECCC, a more specific description of PTSD and related concepts in Cambodia are provided. In chapter 2.6 further psychiatric disorders resulting from traumatic experiences are described.

2.4 Witnesses in international criminal trials

Whereas only 33 witnesses testified for the prosecution and 61 witnesses for the defense in the trial before the International Military Tribunal at Nuremberg (IMT) against major war criminals (International Military Tribunal, n.d.), 416 witnesses testified before the International Military Tribunal for the Far East (“Tokyo trial”, n.d.). In the Eichmann trial, the majority of the more than 110 witnesses who testified were survivors of the Holocaust (Dahne & Koopmanns, 2011). Over 4,000 witnesses appeared before the International Criminal Tribunal for the former Yugoslavia (ICTY) as of early 2011 (“ICTY”, n.d.). These high numbers of witnesses having appeared before international courts suggest that oral evidence plays an increasing role in international criminal trials. Many of the witnesses were particularly alleged victims of the crimes the defendants were charged with and/or lower-level perpetrators testifying in cases against senior leaders. These victims of human rights violation testifying as legal witnesses in international criminal trials frequently suffer from chronic clinical psychological problems, such as PTSD and depression.

2.5 Posttraumatic stress disorder

Surviving and/or witnessing genocide, war, and torture can result in a wide range of mental and physical health consequences, with posttraumatic stress disorder (PTSD) being highly prevalent (Van Velsen, Gorst-Unsworth, & Turner, 1996). However, the relation between experiencing traumatic events and developing a mental illness is not predetermined. By definition, each individual suffering from PTSD has experienced at least one trauma, but not everyone who experiences trauma gets PTSD – the development of PTSD or other psychiatric illnesses after a trauma is, in fact, rather the exception than the rule. The National Comorbidity Survey (NCS) suggests an overall PTSD rate after exposure to trauma not higher than 7.8% (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Nevertheless, in populations

affected by war, PTSD rates are much higher, indicating, inter alia, a dose-effect relationship between traumatic exposure and PTSD. De Jong, Komproe, Van Ommeren, El Masri, Araya, Khaled, van de Put, & Somasundaram (2001), for example, found PTSD prevalence rates of 37.4% in Algeria, of 28.4% in Cambodia, of 15.8% in Ethiopia, and of 17.8% in Gaza. If a certain cumulative trauma threshold is exceeded, anybody can develop a PTSD (Neuner, Schauer, Karunakara, Klaschik, Robert, & Elbert, 2004).

2.5.1 Clinical picture

The diagnosis of PTSD is unique in that it requires a specific etiologic event, the exposure to a traumatic stressor (Criterion A). According to the Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association (DSM-IV), a traumatic stressor objectively requires (A1) that the event involved actual or threatened death or serious injury to self or others and (A2) that the person's subjectively response involved intense fear, helplessness, or horror (APA, 1994). Criterion A suggests that not only events which an individual may have experienced but also events which have been witnessed are included and that these events must have been accompanied by strong emotional reactions. War crimes, crimes against humanity, or genocide can evidently constitute an extreme traumatic stressor, both for the direct victim as well as indirect victims who, for example, have to witness a family member being abused, abducted, or killed.

The characteristic symptoms resulting from posttraumatic stress disorder include Criterion B, persistent re-experiencing of the trauma, Criterion C, persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness, as well as Criterion D, heightened physiological arousal. To diagnose PTSD, the full symptom picture must be present for more than 1 month (Criterion E), and the disturbance must cause clinically significant distress or impairment in social, occupational, or other important areas of functioning (Criterion F) (see Table 1 for an overview of the PTSD criteria).

For the sake of completeness, proposed changes in the definition of the clinical PTSD picture within the fifth edition of the DSM will be briefly explained hereafter. As the DSM-5 is only being proposed for May 2013, no repercussions for this thesis have to be taken into account. Draft modifications to the diagnosis were recently made public by the American Psychiatric Association on their website, DSM5.org. The proposed revision is quite conservative. It now includes 20 rather than 17 symptoms. The three new symptoms are erroneous self- or other-blame regarding the trauma, negative mood states, and reckless and maladaptive behavior.

DSM5 retains the basic PTSD template, although the C Criterion (avoidance/numbing) has been divided into two clusters: Avoidance behavior and negative alterations in cognitions and mood. Although some researchers argued that Criterion A could be abolished altogether (e.g., Brewin, Lanius, Novac, Schnyder, & Galea, 2009), the A1 Criterion has been retained and explicated with greater clarity, whereas the A2 Criterion has been eliminated (Friedman, Resick, Bryant & Brewin, 2011).

Table 1

DSM-IV criteria for post-traumatic stress disorder (309.81).

Criterion A	Confrontation with a life-threatening event; Reacting with fear, helplessness or horror
Criterion B Re-experiencing	The event is reexperienced in one of five ways: 1. Intrusive recollections 2. Distressing dreams 3. Flashbacks/reliving of the experience 4. Psychological distress on confrontation/association 5. Psychological reactivity on confrontation/association
Criterion C Avoidance and Numbing	At least three of seven symptoms of avoidance and impaired responsiveness: 1. Avoidance of trauma-associated thoughts, feelings and conversations 2. Avoidance of trauma-associated activities, situations, persons 3. Amnesia in terms of the trauma 4. Decline in interests 5. Isolation, alienation 6. Impaired affect 7. Pessimistic future expectations
Criterion D Hyperarousal	At least two of five symptoms of increased arousal: 1. Difficulty falling or staying asleep 2. Irritability/outbursts of anger 3. Difficulty concentrating 4. Hypervigilance 5. Exaggerated startle responses
Criterion E	Duration of symptoms (B, C, D) is more than one month
Criterion F	The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

2.5.2 Trauma and memory

Understanding how trauma affects memory plays a central role in legal investigations, as memory is one area which is crucial for the accurate reporting of witness testimony. Memories of traumatic experiences can be qualitatively different from normal autobiographical memories. An autobiographical memory for a normal event is verbal, sequenced (having a beginning, middle, and end), recognized as being in the past, and may be recalled voluntarily (Herlihy & Stuart, 2007). Autobiographical memory for the trauma in

PTSD often is disrupted. The characteristic of traumatic memories is that they are fragments, usually dominated by sensory, perceptual, and emotional impressions such as images, sensations, smells, or emotional states (Hellowell & Brewin, 2004; van der Kolk & Fisler, 1996; Taylor, 2006). Importantly, probably due to the nature of the memory store in which they are held, they do not provide temporal, causal, or logical connection (Brewin & Holmes, 2003), so they are often experienced as if they were not memories of the past, but current experiences. These types of memories are usually not evoked at will and cannot be integrated into a coherent autobiographical episode, but they are provoked by triggers or reminders of the event. This means that when witnesses are interviewed and asked about traumatic experience and have only, or largely, memories of this fragmentary type, they are unlikely to be able to produce a coherent verbal narrative quite simply because no complete verbal narrative of their experience exists (Brewin, Dalgleish, & Joseph, 1996; Brewin & Holmes, 2003). Because these memories are easily and automatically triggered and are not subject to simple conscious control, it is likely that different aspects will be recalled depending on the triggering events in the interview. The interviewee will report only fragments and impressions which are likely, incidentally, to evoke the feelings that were felt at the time of the original experience – which may be, for example, fear, distress, shame, or anger (Herlihy & Turner, 2006).

Another aspect with traumatic memories is that the person going through the trauma tends to focus on and has less difficulty remembering the central details (Taylor, 2006) rather than precise, specific details that were peripheral to his experience. When talking about disturbing or distressing memories, memory for central details (e.g., major themes of the narrative that were most meaningful or the emotional content) is enhanced at the expense of memory for peripheral details. In the eyewitness research, the narrowing of attention on relatively few elements of the surrounding is known as the “weapon focus” – concentrating on a weapon being brandished by the robber (Loftus, Loftus, & Messo, 1987; McNally, 2003).

Associated with impaired memory performance in PTSD individuals, furthermore, is inconsistency when recalling traumatic experiences. In a British study, asylum seekers with PTSD were interviewed about their experiences and asked the same questions weeks or months later (Herlihy, Scragg, & Turner, 2002). Discrepancies between the initial and later interviews occurred with every participant. In addition, discrepancies are more likely to arise when the details required are peripheral to the interviewee’s experience and when the content is traumatic to the interviewee (Herlihy & Turner, 2006). In the legal context, courts can be

misled in their decision making if they see such an inconsistency as an indicator of inaccuracy rather than an effect of PTSD (Brewer et al., 1999; Herlihy & Turner, 2007).

A further common consequence of trauma is dissociation. This can be defined as a disruption in the usually integrated function of consciousness, memory, identity, or perception of the environment (APA, 1994). Dissociation is not always evident to observers but can appear as seemingly distracted or in a “day dream”. Dissociative symptoms furthermore consist of a subjective sense of numbing, detachment, absence of emotional responsiveness, and reduction in awareness of surrounding (Taylor, 2006). Such symptoms are not under the control of the individual and are usually initiated by high stress or a triggered traumatic memory, as for example by questions in court.

As this thesis examines investigative interviews with traumatized Cambodian witnesses, the following chapter concentrates on prevalence and diagnosis of PTSD in Cambodia. As mentioned before, countries affected by war, as it is the case in Cambodia, have higher PTSD prevalence rates than non war-torn countries. Furthermore, it will be described how ethnocultural components shape the psychological consequences of experienced trauma and influence diagnosis and expression of PTSD in the Cambodian society.

2.5.3 Posttraumatic stress disorder in Cambodia

Cambodians who survived the Killing Fields and the civil wars prior to and following the Khmer Rouge era and remained in Cambodia and those who fled as refugees have experienced extremely high levels of trauma. Compared to the populations of other post-conflict countries, Cambodian residents have an exceptionally high rate of PTSD, reportedly between 11.2% (Sonis, Gibson, de Jong, Field, Hean, & Komproe. 2009) and 28.4% (de Jong et al., 2001). Studies in the Cambodian refugee population have shown even higher prevalence rates for PTSD, ranging from 12% to 62% (Cheung, 1994; Marshall, Schell, Elliot, Berthold, & Chun, 2005). Resettlement stresses can increase the risk of both PTSD and depression (Blair, 2000). In a study of 586 refugees who lived in the Pol Pot reign and had relocated to the United States, older age, poor English-speaking proficiency, unemployment, being retired or disabled, and living in poverty were associated with higher rates of PTSD and major depression (Marshall et al., 2005). Ninety-nine percent of the examined refugees experienced near-death due to starvation, and 90% had a family member or friend murdered. In a study by Mollica, Donelan, Tor, Lavelle, Elias, Frankel, & Blendon (1993), more than 85% of the Cambodians living in Thailand-Cambodia border camps reported that they lacked

food, water, shelter, and medical care and that they experienced brainwashing and forced labor. Additionally, 54% indicated murder of a family member or friend, 36% reported experiencing torture, and 17% rape or sexual abuse. At this point, the strong correlation between measures of traumatic exposure and symptom burden shall be emphasized (Marshall et al., 2005).

2.5.3.1 Impacts of culture on psychological well-being and the development of posttraumatic stress disorder

When examining how traumatized Cambodian witnesses respond to questions asked at the ECCC, it is important to keep in mind that Cambodians may differ from Western people in the way they cope with trauma. The role of culture is critical in determining the expression of symptoms, conceptualization of problems, meaning of trauma/distress, coping efforts, as well as healing practices (Berthold & Gray, 2011). Several researchers argue that PTSD criteria of the DSM-IV (APA, 1994) may not represent the full spectrum of response to trauma across cultural contexts. Therefore, the cross-cultural impacts of psychological trauma and its consequences need to be elucidated (e.g., Eisenbruch, de Jong, & van de Put, 2004). Although traumatic events are a universal part of human experience, many different ethnocultural determinants shape its behavioral, psychological, and social consequences (Marsella, 2010).

Ethnocultural variations in the etiology, diagnosis, and expression of PTSD have also been found in Cambodia. Cambodian refugees often suffer from weak heart syndrome (*khsaoy beh doun*) (Hinton & Otto, 2006), which produces catastrophic cognitions and somatization of psychological distress. Other key symptoms of weak heart are startle or rapidly becoming angry (Hinton, Hinton, Eng, & Choung, 2011). Furthermore, weak heart is believed to result in various dangerous physiological events, such as wind attack (*khyâl attack*). *Khyâl attacks* are found nearly always to meet the criteria for panic attacks and strongly correlate with the severity of PTSD (Hinton, Pich, Marques, Nickerson, & Pollack, 2010).

A concept known to many Cambodians which best captures trauma symptoms has been recently described by local scholars as *baksbat*, literally meaning to break form of body. *Baksbat* describes a person suffering from a psychological breakdown of courage. Fifty-three Cambodian experts, including health staff and linguists, were recently consulted to describe *baksbat*. Then, a quantitative survey was conducted among 390 patients receiving mental health services from the Transcultural Psychosocial Organization (TPO). *Baksbat* contained more symptoms as are defined for PTSD. Out of three components found in *baksbat*,

including broken courage and a loss of self, only psychological distress showed similarities to PTSD. Another symptom detected was “dam doem kor”, meaning “plant the mute tree”, referring to the inability to see, hear, or speak out. Furthermore, a symptom describing a “loss of togetherness” is not mentioned in PTSD (Foster, 2010).

In general, it can be said that among Cambodians symptom presentations tend to be more somatic, and the meaning and interpretation appears to be richly dependent on culture-related beliefs, as is the case in the “wind” ethnophysiology. Several explanations have been put forward to account for this tendency among Cambodians to somatize their psychological problems. Firstly, they often minimize or even ignore their past trauma and associated symptoms possibly because of guilt and shame. There is still a strong stigma attached to psychiatric illness among South-East Asians. Secondly, Cambodians tend to be reserved in expressing their emotions and avoid any strong display of affect. Strong or uncontrolled emotions are, in fact, considered to be pathological in most South-East Asian cultures (Cheung, 1993).

2.6 Trauma related disorders besides posttraumatic stress disorders

PTSD is not the only mental disorder that can result from traumatic experiences. On the contrary, individuals diagnosed with PTSD have exceptionally high rates of other psychiatric disorders (Breslau, Davis, Andreski, & Peterson, 1991; Kessler et al., 1995) that in turn can influence ability to testify in court. These mental diseases include major depression and anxiety disorders other than PTSD and substance use disorders. Data from a representative sample of nearly 6000 adults in the United States (NCS) reported that 88% of men and 79% of women with chronic PTSD met criteria for at least one other psychiatric diagnosis (Kessler et al., 1995). A substantial proportion, ranging from 21% to 94%, of persons suffering from PTSD show a co-morbid depression (e.g., Mollica, McInnes, Sarajlic, Lavelle, Sarajlic, & Massagli, 1999; Salcioglu, Basoglu, & Livanou, 2003), 39–97% suffer from co-morbid anxiety (e.g., Sundquist, Johansson, DeMarinis, Johansson, & Sundquist, 2005; Hashemian, Khoshnood, Desai, Falahati, Kasl, & Southwick, 2006), and 11–67% endorse a triple-comorbidity, namely having anxiety and depression in addition to PTSD (e.g., Brady & Clary, 2004; Hashemian et al., 2006).

2.6.1 Depression

Unlike PTSD, major depression does not require an etiologic event as an essential part of its definition. However, in major depression a stressful life event not uncommonly precedes and apparently triggers a depressive episode, and major depression is one of the primary psychiatric outcomes of trauma, regardless of the type of trauma. In some populations, depression is even more prevalent than PTSD (Silove & Kinzie, 2001). Additionally, high rates of comorbid major depression in persons diagnosed with PTSD have been reported. Several possible causal pathways have been suggested to explain this association between PTSD and major depression following trauma. First, pre-existing psychiatric disorder increases a person's vulnerability to PTSD in the aftermath of trauma (Breslau, Davis, Peterson, & Schultz, 1997; Bromet, Sonnega, & Kessler, 1998; Connor & Davidson, 1997), and conversely, the presence of PTSD may increase the risk for first onset of major depression (Kessler et al., 1995; Breslau et al., 1997). These findings suggest the possibility of a shared vulnerability for both disorders. A second explanation is that PTSD is a causal risk for depression (Kessler et al., 1995). According to a third hypothesis, PTSD and depression are independent disorders which co-occur due to shared risk factors (Bleich, Koslowsky, Dolev, & Lerer, 1997). A last explanation is that the observed comorbidity is merely an artifact of symptom overlap (Franklin & Zimmerman, 2001; Southwick, Yehuda, & Giller, 1991). All of the four mechanisms are supported by empirical evidence.

From a clinical point of view, the core symptoms of a depressive episode include the following: depressed mood, loss of energy, difficulty with concentration and short-term memory and decision making, loss of interest in pleasurable activities, insomnia or, less commonly, hypersomnia, anorexia and weight loss or, less commonly, hyperphagia and weight gain, psychomotor agitation or, less commonly, retardation, and, finally, a pessimistic outlook that is often accompanied by suicidal ideation. According to the DSM-IV, a person who suffers from major depressive disorder must have depression symptoms for at least two weeks. Furthermore, social, occupational, educational, or other important functioning must also be negatively impaired by the change in mood (APA, 1995).

Depression rates obtained in surveys with populations from or residents in Cambodia range between 11.5% and 55% (de Jong, Komproe & Van Ommeren, 2003; Mollica et al., 1993).

2.6.2 Other posttraumatic outcomes

Often neither PTSD nor depression captures the full range of distress. As mentioned before, a high proportion of those who have experienced traumas additionally suffer from co-morbid anxiety. In patients who have PTSD, the risk of almost all anxiety disorders is increased markedly. In general, phobias tend to be more prevalent than generalized anxiety disorder or panic disorder (Brady, Killeen, Brewerton, & Lucerini, 2003). Furthermore, a strong relationship has been found between post-trauma psychopathology and substance abuse. In the NCS, among males with PTSD, 51.9% had comorbid alcohol abuse or dependence. Women with PTSD had lower rates of comorbid alcohol abuse or dependence (27.9%) but showed higher rates of panic disorder (12.6% vs 7.3%) and agoraphobia (22.4% vs 16.1%). Empirical studies indicate the relationship between PTSD and substance use disorders may occur bidirectional, with a diagnosis of either substance use disorders or PTSD increasing the risk of developing the other (Brady, Dansky, & Sonne, 1998; Dansky, Saladin, Brady, Kilpatrick, & Resnick, 1995).

Besides the most common comorbid conditions that include depression, substance abuse, and other anxiety disorders (Kessler et al., 1995; Breslau et al., 1991), patients with PTSD are also frequently comorbid for axis II disorders and vice versa. Among patients with personality disorders who reported any traumatic event, a 35% lifetime prevalence of PTSD has been found as well as an association between severity of traumatic exposure and severity of personality disorder (Yen, Shea, Battle, Johnson, Zlotnick, Dolan-Sewell, et al., 2002).

Furthermore, a host of other types of symptoms have been found in traumatized people, including guilt/shame symptoms, dissociative symptoms, and aggressive/externalizing symptoms (Briere & Scott, 2006), as well as suicidality. The rate of attempted suicide in PTSD patients is estimated at 20% (Davidson, Hughes, Blazer, & George, 1991).

Because PTSD is more often accompanied by another disorder than manifested alone, some authors suggested that the diagnosis of PTSD may be reorganized as a category of posttraumatic spectrum disorder rather than a distinctive diagnostic entity (Jung, 2004; Moreau & Zisook, 2002). According to this suggestion, this category would include several subtypes of PTSD (e.g., PTSD with depressive features).

To summarize, Cambodian witnesses can suffer from a wide range of psychopathological symptoms. This in turn influences the way they will testify at the ECCC about the possible

horrific events they have experienced during the Khmer Rouge period. In the following section the historical background of today's Cambodia is described. It shows how the Khmer Rouge regime took over control in the country and how Cambodian people suffered during this period. Subsequently, a description of the ECCC, the court that deals the regime's atrocities, is delivered.

2.7 HISTORICAL AND POLITICAL BACKGROUND TO TODAY'S CAMBODIA

2.7.1 The rise and fall of the Khmer Rouge Regime

The Communist Party of Kampuchea (CPK), or better known as the Khmer Rouge, under their leader Pol Pot seized control of Cambodia in April 1975 after a protracted fight against a pro-American, anti-communist regime, known as the Khmer Republic, under General Lon Nol. When the Indochinese war expanded into Cambodia, Lon Nol himself had staged a coup against the government of Prince Norodom Sihanouk in 1970, who controlled the direction and policies of Cambodia as head of the state since its independence from France in 1953. Under Lon Nol the United States carpet bombardments intensified in order to push back communist threats. An estimated 0.5 million tons of bombs were dropped and it is estimated that over 100,000 people lost their lives as a result of the US bombardment (Kiernan, 1989).

Frustrated by the US bombings and Cambodia's support of the United States in the Vietnam conflict and influenced by communist doctrine, the Khmer Rouge leaders envisioned a revolution that would transform Cambodia into a classless agrarian society based on an extreme version of Maoist collectivism in order to achieve self-sufficiency (Menzel, 2007). After seizing control over Cambodia's capital, the Khmer Rouge began emptying Phnom Penh of its 2.5 million inhabitants. The forced evacuation of many other cities to rural areas, where Cambodians were subjected to forced labor in collective farms and inhumane living conditions, ensued (Kiernan, 2008).

The Khmer Rouge regime sought to eliminate all fundamental societal and cultural elements suspected of being hostile to the new order — schools, universities, monasteries, and courts were closed, television and radio stations stopped broadcasting, free markets and the use of money were prohibited, religious practice, traditional rituals, and even the use of foreign languages were banned (Tully, 2005). Cambodia was widely isolated from the outside world and in fact became a huge labor camp and state-sized prison (Menzel, 2007). The whole state operated on the basis of the orders of “Angkar” (“organization”), which was a synonym for the revolutionary party or even Pol Pot himself. The most important aspect of the intention to

transform the country into a socially and ethnically homogeneous society was the systematic and deliberate torture and murder of Cambodian citizens, which, along with disease and starvation that accompanied the regime's policies, killed 1.7 million — about every fourth Cambodian at that time (Kiernan, 2008). Three main targets for execution during the Khmer Rouge regime existed and each of them chosen to serve a strategic goal (Luftglass, 2004). First, all remnants of the former government of General Lon Nol were executed. Second, the regime committed intra-party purges geared toward purification of the Communist Party. Third, through “assertive killings”, the Khmer Rouge communists executed those who might otherwise pose a threat to the regime. “Killing fields” have been found all over the country.

In Phnom Penh, the Khmer Rouge established a special prison which became known as “S-21” or Tuol Sleng Prison. S-21 best exemplifies the lethal nature of the Khmer Rouge regime in the late 1970’s and can be seen as a microcosm of the Khmer Rouge atrocities. Of the 16,000-20,000 prisoners only seven survivors are known to be alive. The Khmer Rouge guards at S-21 subjected the prisoners to various methods of torture, culminating in the forced, written confessions of over 4,000 Cambodians. Methods of interrogation included electric shocks, severe beatings, removal of toenails and fingernails, submersion in water, cigarette burnings, needling, suffocation, and suspension (Luftglass, 2004).

The era of Democratic Kampuchea ended in January 1979 when Vietnam launched an invasion of Cambodia following an ongoing flood of refugees fleeing Cambodia and protracted border disputes. After the installation of the Vietnamese-supported People’s Republic of Kampuchea, many of the remaining Khmer Rouge leaders fled and re-established themselves on the Cambodian-Thai border. The war between Khmer Rouge forces and government forces continued for more than a decade and the Khmer Rouge retained a degree of control over parts of Cambodia as well as Cambodia’s seat at the United Nations. Following international mediation, a peace agreement was signed in 1991, which led to a United Nations mission being sent to Cambodia (United Nations Transitional Authority in Cambodia, UNTAC) to ensure free elections in 1993. Although the Khmer Rouge refused to cooperate with the UNTAC (Rowley, 2005) in some isolated strongholds, their leaders remained in power until the movement finally collapsed in 1998.

2.8 THE EXTRAORDINARY CHAMBERS IN THE COURTS OF CAMBODIA

2.8.1 Establishment

Despite the unspeakable horrors that occurred in Cambodia between 1975 and 1979, no Khmer Rouge official has ever been held criminally responsible for the regime's atrocities in a credible court of law until 2010. Some of the most infamous Khmer Rouge leaders have passed away, including party secretary Pol Pot and defense minister Son Sen. The impetus for a tribunal to try senior leaders responsible for the crimes committed by the Khmer Rouge came in the form of an official request by the Cambodia government to the UN secretary general in June 1997, soliciting the assistance of the UN and the international community in establishing the truth about and bringing to justice persons responsible for the crimes committed during the Khmer Rouge regime (Jain, 2010). Negotiations about the possibilities of UN assistance lasted until 2003 when an agreement was met. In June 2007, after a long and complex process, the Khmer Rouge Tribunal, formally known as the Extraordinary Chambers in the Courts of Cambodia (ECCC), began its judicial activities with the adoption of its Internal Rules in June 2007, and it started working on their mandate to bring to trial senior leaders of Democratic Kampuchea and those who are most responsible for genocide, crimes against humanity, serious war crimes, and certain other crimes that were committed during the period from 17 April 1975 to 6 January 1979. Since then, the tribunal has initiated proceedings against five defendants, Nuon Chea, Ieng Sary, Khieu Samphan, Ieng Thirith, and Kaing Guek Eav, senior leaders of the Khmer Rouge, who freely lived in Cambodia until 2007 (Petit & Ahmed, 2010).

2.8.2 The organizational and legal framework

The ECCC as a hybrid institution is based on the application of national and international laws and employs both international and domestic staff. In doing so, it seeks to provide a localized sense of accountability within a partly internationalized court body (Manning, 2012). The court has three chambers: a pre-trial chamber, a trial chamber and an appellate chamber. The trial chamber of five judges consists of three Cambodian judges and two international judges. Important decisions must be made by a "super-majority" of four out of the five judges in order to ensure the vote of at least one international judge for any decision (Ellis, 2011). But also in other important positions within the court, such as prosecutors, civil party lawyers and defense counsel, a careful balance between Cambodians and internationals is employed.

Compared to other permanent and ad hoc tribunals where the adversarial system dominates the proceedings, the ECCC proceedings are characterized by an inquisitorial model (Jasini & Phan, 2011). This approach resulted mainly from the strong reliance of the overall Cambodian system on the French inquisitorial legal system. In the inquisitorial system, judges are not passive recipients of information but play a more active role in controlling the course of proceedings. They actively steer the search for evidence and are empowered to put questions to the witnesses. At the ECCC, the judges of the trial chamber call witnesses, whose responses are deemed useful in the revelation of the truth, and primarily lead the evidence in the case (Staggs Kelsall, Baleva, Nababan, Chou, Guo, Ehlert et al., 2009). Further features that characterize this inquisitorial system employed at the ECCC include the discovery of evidence being court-driven rather than party-driven and the substantive rights of victims to participate throughout the proceedings as “civil parties” (Petit & Ahmed, 2010). At the ECCC, for the first time in an international criminal trial, victims of mass atrocity were having a role beyond being called as mere witnesses. As civil parties they could bring claims for reparations against the defendants. Furthermore, the civil party is basically third party before the court in that civil parties have basically equal procedural rights with those of the defense and the prosecution in the criminal proceedings, including legal representation (Pham, Vinck, Balthazard, Strasser & Ohm, 2011). During trial 1, all of the civil parties testified openly and publicly in the courtroom without the use of protective measures, as for example voice distortion (Stover, Balthazar, & Koenig, 2011).

2.8.3 Case 001

On March 30, 2009, the ECCC commenced its first trial in the case against Kaing Guek Eav, alias “Duch”, the head of the infamous Tuol Sleng Prison in Phnom Penh. Case 001 came to a close on November 27, 2009, and the judgment was rendered on July 26, 2010. After 72 days of evidence, Duch was found guilty by the trial chamber of crimes against humanity and grave breaches of the Geneva Conventions of 1949 and was convicted to 35 years in prison – reduced to 19 years for pre-trial detention (Jasini & Phan, 2011). The sentence was appealed against by both prosecutors, who called for life imprisonment, and by the accused, who argued it was too harsh because he neither qualifies as a senior leader nor an individual most responsible for the crimes committed during DK period. On February 3, 2012, the appellate chamber of the ECCC rejected Duch's defense and imposed a life sentence on him (Defalco, 2012). A large proportion of the audience of the ECCC, which included some 30,000 people bussed in to attend the proceedings in the largest public gallery of any war crimes tribunal,

and millions more who followed the Duch trial on television welcomed this second verdict as it better recognizes and confirms the gravity of the crimes committed (Subrahmanyam, 2012).

In the Duch trial, 90 people participated as civil parties or civil party applicants in the trial, 28 of whom were accepted as civil parties during the investigation phase and 62 were only provisionally accepted or pending, leaving the Trial Chamber to decide on their admissibility (Pham et al., 2011). Among those provisionally accepted or pending, 24 were rejected at the time of the verdict on the ground that they had not demonstrated a link to S21, either as a direct survivor or by bond of kinship, affection or dependency with a S21 victim (Pham et al., 2011). Civil parties were represented by both Cambodian and international lawyers.

2.8.3.1 Examination of witnesses in Case 001

At Case 001, 69 persons other than the accused provided evidence to the chamber. Of these, 22 were civil parties, 9 were expert witnesses and 38 testified as witnesses of fact. Of these witnesses of fact, 14 provided sworn affidavits, while 24 gave oral testimony. The witnesses who testified in court included 12 persons who gave evidence as former employees of Khmer Rouge prisons, 7 character witnesses, and 5 victim witnesses. All witnesses testified in open sessions (Staggs Kelsall et al., 2009). The statutory provisions and recent practice indicate that the judges question the witnesses first, followed by the prosecutors, the civil party lawyers, and the defense (Petit & Ahmed, 2010). Prosecutors were allowed to ask witness questions for 15, 30, 45, and 60 minutes, respectively, depending on the length of overall witness account. Civil party groups and defense had a limited amount of time to interview – 20, 40, 60, or 80 minutes. No time allocation was defined for the interviews by judges.

2.8.4 Case 002

With the closure of Duch's case, the ECCC could turn its attention to Case 002, currently underway, which involves the Khmer Rouge's four most senior surviving leaders. On November 21, 2011, the trial chamber began to hear evidence against: Nuon Chea, former deputy secretary of the Communist Party of Kampuchea (CPK), Ieng Sary, former deputy prime minister for foreign affairs, and Khieu Samphan, former head of state.

After having presented the psychological factors affecting the quality of investigative interviews, an overview on vulnerable witnesses (including witnesses suffering from mental disease such as PTSD and major depression), a description of the Cambodia's historical and

political background, as well as the court proceedings at the ECCC, chapter 2.9 now gives an overview on methodological issues related to research on investigative interviews and particularly focuses on the examination of real word behavior in the field.

2.9 METHODOLOGICAL ASPECTS OF RESEARCH ON INTERVIEWS WITH TRAUMATIZED WITNESSES

Two broad methods have been employed to study the investigative interview – namely, laboratory research and field observations. Hereafter, the two methods are described. The focus lies on field studies, particularly on linguistic analysis of field data, such as linguistic analysis in courtroom and language use of trauma victims.

2.9.1 Experimental studies

Most of the research on eyewitness performance has taken place in a laboratory situation, which has raised concerns about its external validity. According to Davies (1992), the problems of the generalizability and reliability of research findings are nowhere more acute than in the study of witnessing. Therefore, not surprisingly, the methodology of eyewitness research has been the subject of debate and controversy.

For some psycholegal researchers, methods and subject sample employed are diverse enough (Loftus, 1983; Haber & Haber, 2000), and the body of empirical evidence extensive enough to warrant the generality (Flowe, Finklea, & Ebbesen, 2009). Others have argued that the conditions (the witnessing, testing, and/or measurement contexts) experienced by the laboratory research participants may not be representative of the conditions faced by the actual witness, and that laboratory research therefore should be abandoned in favor of realistic field situations. For example, due to ethical standards in laboratory studies, the vast majority of eyewitness research is conducted with witnesses who are observers of trivial events. Results of this research may therefore be only applicable to that type of witness: a nonparticipatory observer of an event of little impact. However, an unaffected eyewitness is a rather rare occurrence in forensic contexts (Yuille et al., 1999).

There is no doubt that participants in experimental studies are unlikely to experience the varying degrees of emotional arousal, stress, or the trauma experienced by real-life witnesses to such serious crimes as assault, rape, abduction, homicide, war crimes, and genocide as it is the case in victims of the CPK. Therefore, in making generalizations from the experimental

studies to actual cases, one must be sensitive to differences between the two settings with respect to the environmental and emotional context in which interviews with witnesses are carried out (e.g., Flowe et al., 2009; Yuille, 1993). Yuille and Wells (1991) have expressed the need for more comparisons between experimental studies and field contexts so that the similarities and differences between the two can be enunciated.

2.9.2 Field studies

Whereas in an experimental setting the “subject” is forced to act within a severely limited environment and to comply with rules established by the experimenter (Mehl, Conner, & Csikszentmihalyi, 2012), field studies (e.g., observational research on actual witness in court) are excellent for investigating natural occurring behavior in the real world context (Hogg & Vaughan, 2011), meaning outside the artificial setting of the laboratory.

In the field of psychology, a renewed commitment to real-world behavior research (Baumeister, Vohs, & Funder, 2007; Furr, 2009; Rozin, 2009) has recently taken place. Thus, new methods of data collection have been developed. Technological advances have broadened the type of information available for direct behavioral observation. Apart from live observation of participants’ behavior, direct behavioral observations can be derived from written records of observed behavior as well as from video and auditory recordings (Furr, 2009). As a new way of accessing objective (in the sense of traceable) aspects of daily life, Mehl and colleagues (Mehl & Pennebaker, 2003; Mehl, Pennebaker, Crow, Dabbs, & Price, 2001), for example, have used the electronically activated recorder (EAR) to record verbal behavior in people’s daily lives.

Most often in field studies, the observer is non-intrusive by not participating in the behavior (nonparticipant observation) and “invisible” as participants are usually completely unaware that an experiment is taking place. Therefore, no demand characteristics are present (Hogg & Vaughan, 2011). Furthermore, field research offers investigators an alternative to ameliorate some of the ethical issues that arise in the laboratory context (Kimmel, 2004).

However, field studies in the domain of witness testimony are still few relative to the number of experimental studies. The weakness of field studies is, namely, that they suffer from issues of internal validity in that uncontrolled, unmeasured, and confounding variables may be involved. Field studies lack the experimental controls that might enable researchers to draw causal conclusions (Lassiter & Meissner, 2010).

Ultimately, both research approaches – experimental and field studies – are therefore necessary to understand the process of investigative interviewing and the psychology of testifying in the courtroom. A finding obtained by using both experimental simulation and field research is more convincing evidence than a finding obtained by only one research approach alone. However, research in a forensically relevant field setting sometimes provides a complexity of variables not possible to simulate in the laboratory (Behrman & Davey, 2001) and allows analyzing real crime victims who may be traumatized and in a state of high emotional arousal when testifying in court. Field research or real-world behavioral research therefore carries the distinct advantage of a high ecological validity, whereas the experimental method, due to the reduction of variables to those that can be manipulated in the laboratory, often yields results that have low ecological validity (Mehl et al., 2012).

2.9.2.1 Linguistic analyses

Assessing aspects of people's daily lives also functions through an analysis of their language, as language is the most common way for people to translate their internal thoughts and emotions into a form that others can understand (Tausczik & Pennebaker, 2010). Words and language people use in their daily lives can therefore be related to many aspects of their experience, such as their personality and social lives, and can be seen as important diagnostic markers of their mental and social state.

However, the methods of studying natural word use, such as responses to questions, natural interactions, and written or spoken text, have been the subject of controversy. There is a lack of agreement over the appropriate dimensions of language and, once selected, over determining the best unit of analysis (Pennebaker & King, 1999).

Qualitative methods, such as, for example, the conversation analysis, assume that due to the contextualization of verbal utterances and their complexity decoding can only be undertaken by human judges, who then evaluate what is said or written. Qualitative approaches increased in the foundation years of the social sciences from the mid 19th century to the mid 20th century. From the 1920s onwards, the rise of survey research and advances in statistical techniques, assisted by the development of computers making it much easier to analyze large datasets, meant that by the 1970s quantitative methods had come to predominate (Moriarty, 2011). Only very few qualitative analyses rely on numbers or statistics (Schiffrin, 1994). Table 2 briefly presents some differing approaches to qualitative research, although in practice, qualitative researchers often combine different methods (Moriarty, 2011).

Table 2
Four different approaches to qualitative research

Approach	Description
Grounded Theory	Grounded theory is a systematic methodology involving the discovery of theory through the analysis of data. It seeks to generate ideas from the data, rather than establish the accuracy of existing hypotheses (Charmaz 2003).
Case Studies	Case studies are intensive analyses of an individual unit (e.g., a person or group) stressing developmental factors in relation to context (Flyvbjerg, 2011).
Conversation Analysis	Conversation analysis (CA) treats all talk as social action and is based on transcribed audio-recordings of naturally occurring interactions. CA focus on the recurrent properties of what is termed talk-in-interaction (e.g., taking turns in speaking, interrupting) (Hutchby & Wooffitt, 2008).
Life History and Narrative Approaches	Life history and narrative inquiry research are in-depth ways of gathering, analyzing and interpreting the stories that people tell about their lives. They use a multiplicity of ways of collecting this information, including interviews, diaries, photographs and letters (Marshall & Rossman, 2011).

However, the most common methodologies in studying natural language use are quantitative approaches that include manual word counts, such as standard grammatical units (personal pronouns, prepositions) or psychologically derived linguistic dimensions (e.g., emotion words). These strategies are based on the premise that the words people use provide psychological information over and above their literal meaning and independent of their semantic context (Pennebaker, Mehl, & Niederhoffer, 2003). Since the 1990's with the simultaneous development of high-speed personal computers and the Internet, a new era of computer assisted text analysis tools, such as the famous Linguistic Inquiry and Word Count, or LIWC (Pennebaker, Booth, & Francis, 2007), has evolved. The LIWC software counts the frequency of words in 80 predefined categories, including linguistic processes (e.g., articles, prepositions), psychological processes (e.g., emotional, cognitive, and perceptual processes), words denoting relativity (e.g., time, space), and personal concerns (e.g., religion, work). Over 86% of the words people use in spoken and written comments can be captured by the LIWC2007 dictionary (Pennebaker et al., 2007), the newest version available. The LIWC word categories have adequate psychometric properties (Pennebaker et al., 2007), and the use of the LIWC to measure psychological processes has increased in the past few years (Kahn et al., 2007). Meanwhile, hundreds of studies have linked LIWC language categories to interesting psychological processes (for an overview, see Tausczik & Pennebaker, 2010). Furthermore, with the development of such well-validated computer-based language analysis programs such as the LIWC examining patterns of natural language use in relation to psychological phenomena has become less slow, complex, and costly.

2.9.2.1.1 Researching courtroom language

The analysis of investigative interviewing in the courtroom can also draw on work in linguistics. From a survey of the literature on courtroom language, Cotterill (2003) identified four major areas where analytic attention has been focused:

- 1.) Interactional dynamics in the courtroom
- 2.) Formal and functional properties of questions and answers
- 3.) Styles of testimony and their influence on juries
- 4.) Power and ideology in trial language

A high number of studies in the area of interactional dynamics have been undertaken from the perspective of conversational analysis. Results of these studies illustrated the before mentioned essential asymmetry of spoken legal discourse in that the talk in examination is organized into series of “questions” and “answers” pairs (Atkinson & Drew, 1979) and how this specialized speech-exchange system is exploited in cross-examination to challenge versions of the event reported by the witness. Matoesian (1993) focused on interactional characteristics of a rape trial and argued that cross-examination questioning techniques serve as an exemplification of patriarchal domination in the courtroom. In a later study he analyzed how the repetition of questions and question patterns serves to reorient the witness’ account of the crime in an attempt to persuade the jury (Matoesian, 1997, 2001).

Just as the majority of linguistic studies have focused on lawyer-witness talk, they have also tended to concentrate on one particular utterance type – the question-and-answer-adjacency pair (Cotterill, 2003). The research literature is dominated by investigations of lawyer questions from a formal perspective, often with a quantitative dimension, comparing for example the use of open and closed questions in direct and cross-examination (see chapter). In the 1980’s the formal perspective was extended – researchers additionally focused on functional properties of questions. Researchers such as Harris (1984) and Luchjenbroers (1997) have analyzed the relatively strategic value of different question forms in creating and maintaining the asymmetry within the lawyer-witness dyad. A number of researchers have then shifted the emphasis away from the lawyers towards research on different styles of witness testimonies. O’Barr (1982), for example, has examined “narrative” and “fragmented” witness testimonies and concluded that the jurors perceived witnesses who were permitted to employ a narrative style as more credible.

In her book about language and power in court, Cotterill (2003) has stated that much of critical attention has been directed towards power and ideology in court, as expressed in linguistic strategies used by the legal investigators. As Philbrick stated in 1949, “Lawyers are students of language by profession, and they exercise their power in court by manipulating the thoughts and opinions of others through the skillful use of language” (p. vi). Socio-economic variable of gender and class, for example, appear to influence the outcomes of the defendant’s interaction with the judge (Wodak, 1985). Therefore, close linguistic analyses of legal language can be used to illuminate social inequities.

However, most of research about sociolinguistic and law which is written in English is about the common law system (Eades, 2010), and, as mentioned earlier, the speech event known as witness examination is different in the two systems of justice, the adversarial and the inquisitorial ones. Furthermore, linguistic analyses in the courtroom have mostly been undertaken by qualitative research strategies.

2.9.2.1.2 Language and trauma

Linguistic strategies of lawyers to control witnesses appear to be more prevalent in cases including vulnerable witnesses, such as victims of rape, sexual assault, and domestic violence (Cotterill, 2004). However, such traumatized witnesses may already face a disadvantage in articulating their stories due to their trauma memories. Namely, trauma narratives can be seen as memory reports (see chapter 2.5.2). There is support for the view that the organization of autobiographical memory is primarily around narratives like structures (Robinson & Taylor, 1998). The examination of PTSD trauma narratives in terms of their lexicon and linguistic structure therefore warrant support and development.

Clinical observations suggest that accounts of trauma by untreated chronic PTSD patients are characterized by an abundance of speech fillers, repetitions, incomplete sentences, disorientation of space and time, and general confusion (Foa, 1993). The process of organizing and articulating the traumatic memories appear to be related to post-trauma recovery. In a study by Foa, Molnar and Cashman (1995), the content of the initial and last narrative recounted by sexual and nonsexual assault victims during exposure therapy was analyzed with a coding system specifically developed for the study. Compared to the first narrative, last narratives were longer and organized and contained a higher number of thoughts and feelings. The increase in organized thoughts was related to a reduction in

depression, while a decrease in fragmentation was associated with a reduction with trauma-related symptoms.

The importance of processing narratives of stressful life events for well-being was also examined by Pennebaker and colleagues. With the LIWC, they analyzed linguistic aspects of a narrative such as the percentage of words in particular categories (i.e., emotion words and words about cognitive processes) and the total number of words, and they found that emotional expression (both negative and positive words) and cognitive processing (i.e., words such as realize, understand, and think) during writing about stressful events predicted improved physical health (Pennebaker, 1993; Pennebaker & Francis, 1996). The researchers suggested that emotional expression and cognitive reappraisal of such an event, as evidenced by the use of certain phrases, mediate autonomic processes that foster improved physical health.

Furthermore, narratives of negative life events with an emotional impact to the person were characterized by an increased number of words, a greater number of sentences, and they contained more emotional words compared to events without emotional impact (Rullkoetter, Bullig, Driessen, Beblo, Mensebach, & Wingenfeld, 2009). Chung and Pennebaker (2007) found that writing about cultural upheavals was related to an increased use of first person plural “we”. Alvarez-Conrad, Zoellner, and Foa (2001) could show that revealing a higher amount of words related to death and dying during exposure therapy was associated with a worse post-treatment functioning. A greater use of cognitive words, on the other hand, was related to less anxiety after the treatment. Another study by the same research group provided evidence of more somatosensory detail in trauma narratives among high compared with low dissociators (Zoellner, Alvarez-Conrad, & Foa, 2002). In a study by Hellowell and Brewin (2004), 66 participants meeting diagnostic criteria for PTSD completed a detailed written trauma narrative and then identified those sections in the narrative that had been written in flashback and ordinary memory periods. Results indicated that flashback periods were characterized by greater use of perceptual detail, by more mentions of death, more use of the present tense, and more mention of fear, helplessness, and horror.

2.10 Conclusions

Testimonies of witnesses have proven to be central in court trials. They provide judges and juries with evidence that will influence their decisions about the guilt of an accused person. The way in which the investigator interviews witnesses and how they respond are interpreted

to have an important influence on the quality of the information retrieved. In particular, vulnerable witnesses such as traumatized witnesses must be interviewed with delicacy as the sequelae of trauma can have profound effects on the ability to testify. Witnesses giving evidence about gross human right violations committed by the Khmer Rouge between 1975 and 1979 at the ECCC can certainly be seen as traumatized. Prevalence rates of PTSD among Cambodians who survived the Khmer Rouge era range from 11.2% to 62% (Sonis et al., 2009; Marshal et al., 2005), and the depression rate lies between 11.5% and 55% (de Jong et al., 2003; Mollica et al., 1993). Furthermore, a high proportion of those who have experienced traumas suffer from anxiety disorders, from substance abuse or dependence, personality disorders, and a host of other types of symptoms including shame and aggression. Such symptoms can interfere with the ability of these witnesses to provide a consistent and coherent narrative account of their trauma experiences in the court. Not wanting or being unable to talk in detail can stem from the effort to avoid stimuli associated with the trauma and from impairment of the ability to concentrate. This can make it very difficult for the witnesses to focus on complex questioning in the ECCC proceedings. Furthermore, sleeping disturbance and constantly being vigilant and on guard, which are further symptoms of PTSD, can diminish the ability of the witness to testify effectively due to exhaustion. This in turn can exacerbate the witness' poor concentration and irritability. Flashbacks during investigative interviews can occur when the witnesses feel as though they are reliving the trauma in the present. Giving accounts associated to their trauma or their meeting with their perpetrators during trial can provoke such flashbacks. Flashbacks cannot be integrated into a coherent autobiographical episode. Due to the characteristics of trauma memory, interviewees may report only fragments and sensory impressions, which are likely to evoke the feelings that were felt at the time of the original experiences. Such feelings can for example be fear, distress, and anger. Outburst of anger may alienate court personnel, particularly if displaying intense emotions does not meet cultural expectation. However, flat or blunted affect and emotional numbness when recounting trauma is often considered as an indicator of untruthfulness of witnesses account.

Even if a witness does not meet the criteria for either PTSD, major depression or other mental disorders, he may face testimonial problems. Giving evidence in open court can cause high distress and anxiety. Being articulate and able to provide an accurate account can be additionally hampered by the fact that witnesses must do so in front of authorities and individuals who perpetrated atrocities. Authority figures can pressure witnesses to comply

with the interviewer and to avoid confrontation. Witnesses then are more suggestible, particularly when traumatized.

For establishing the “truth” of witnesses’ testimonies, lawyers and judges have to rely on their perceived credibility of witnesses. Credibility in court strongly relies on the ability of the witnesses to remember and communicate coherently and consistently. Consistency is deemed as a key factor of witness credibility, whereas inconsistencies within a witness’ account are considered to be indicative of inaccurate testimony and deception. Thus, defense counsel often try to question witnesses in such a manner as to create such inconsistency in order to undermine their credibility. However, from a psychological perspective, inconsistencies in witness narratives can be explained and do not question the value of the evidence. Therefore, the education of lawyers and judges about the manifestations of psychopathological symptoms is crucial where severe trauma is an issue, especially in the context of war crimes tribunals such as the ECCC. However, those responsible for obtaining testimonies (lawyers, judges etc.) often lack scientifically based psychological knowledge and are not routinely trained to conduct interviews. Furthermore, they have no or only little knowledge of interviewing techniques that might optimize the retrieval of information from a witness (Fisher, Geiselman, & Raymond, 1987; Memon, Holley, Milne, Köhnken, & Bull, 1994; Magnussen, Wise, Raja, Safer, Pawlenko, & Stridbeck, 2008). This is somewhat remarkable as the interviewers decisively codetermine the probability of disclosure, the discovery of truth, and the outcome of the proceedings. Research shows that most useful information obtained by witnesses is when interviewers use open, information-seeking questions. Leading, multiple, and forced-choice questions, on the other hand, affect quality of witness reports negatively. Furthermore, establishing rapport with a witness in an investigative interview decreases the distress of testifying and puts the witness at ease. However, little empirical research has been conducted on what exactly constitutes rapport.

Additionally, most research on investigative interviewing and on the evaluation and maximization of witness’ testimony accuracy has been conducted in laboratory analog context. Whilst their findings are helpful for interpreting information from an operational setting, they are a poor substitute for the actual conditions which witnesses endure. Participants in experimental studies in eyewitness research, for example, are non-participatory unaffected witnesses of trivial events, whereas witnesses testifying in international criminal trials experience high levels of emotional arousal and distress when accounting about experienced war crimes. Hence, more empirical research based on actual cases is needed, and

it is crucially important to conduct research in the field so that the applicability of the experimental literature can be evaluated systematically.

Furthermore, laboratory data as well as real-world data derives from investigative interviews in which the adversarial justice system has been applied (or simulated). Witness examination is, however, not equal in the two systems of justice, the adversarial and the inquisitorial ones. In the inquisitorial procedures, examination of witnesses is conducted by or under the close supervision of the trial judge. Only following the judge's interrogation the contending parties are permitted to ask clarifying questions. In the adversary system, the two or more opposing parties are responsible for developing their own evidence and for proving their competing version of the facts. The judge remains an essentially passive listener to the evidence. In the adversarial system, research identified several strategies in cross-examination to impress upon judges or jurors a particular version of the “facts”. However, in both legal systems different parties to the proceedings have different agenda and attempt to elicit witness information favorable to their particular side. For example, victim-witnesses and civil parties at the ECCC, who suffered actual personal injury as a consequence of the alleged offence and who therefore give their evidence against the defendant, can still be challenged by the defense counsel. Thus, in practice, to a certain degree the interviewing of witnesses is carried out by the parties by means of examination and cross-examination as well. According to their own agenda, interviewers of different parties to the proceedings may therefore differ in their questioning and behavior towards the witnesses, which in turn can lead to differences in witness accounts. Hypotheses concerning question style and interviewer behavior arising from research of adversarial systems therefore can also be tested in the inquisitorial procedure applied at the ECCC. As the ECCC is the first operating civil law based tribunal in international criminal law using a predominant inquisitorial structure of the proceedings, there is virtually no research on investigative interviews with traumatized witnesses within such a legal system. Therefore, little is known about how judicial personnel question these vulnerable traumatized witnesses and if there are differences in interviewer question style, in their verbal behavior, and in how they accommodate witnesses. However, from a methodological point of view, analyzing how interviewers differ in their interview style and how this in turn can influence witnesses accounts of trauma is especially well-suited at the ECCC, because there is one homogeneous vulnerable witness group interviewed by several interviewers who differ in their legal roles and therefore in their agendas.

For the analyses of investigative interviews and the interactional dynamics within in the courtroom as well for the analyses of narratives of trauma, one can draw on work of linguistics. The language people use can reveal important aspects of their social and psychological worlds. Their words convey information about themselves, their audience, and the situations they are in. Words people use can even be an indicator of how people cope with traumatic experiences (Holmes et al., 2007; Alvarez-Conrad et al., 2001). Examining patterns of language use in relation to psychological phenomena has become less slow, complex, and costly with the development of computer text analysis methods, such as LIWC (Pennebaker et al., 2007). With this tool, quantities of transcribed verbal investigative interviews can be analyzed in a very swift and economic manner.

To conclude, the aim of this thesis was to investigate how different parties to the proceedings at the ECCC differ in how they accommodate and interview witnesses. Furthermore, we wanted to know how traumatized witnesses testify and if they differ in their testimonies depending on the interviewing parties to the proceedings.

In the first empirical study (Chapter 3.1), we investigated transcribed testimonies, translated from Khmer into English, of 24 victim witnesses and civil parties, using the LIWC. The hypotheses tested were, inter alia, if testimonies given to judges, to prosecutors, to civil party lawyers, and testimonies given to defense counsel significantly differ from each other in psychologically relevant LIWC categories, such as the number of cognitive, emotional, and perceptual process words used.

The second empirical study (Chapter 3.2) has been undertaken in order to find out how interviewers differ in their verbal behavior towards the 24 victim witnesses and civil parties. The hypothesis tested was that law-enforcement personnel (judges, prosecutors, civil party lawyers, defense counsel) differ in their linguistic patterns associated with regulating social distance. We assumed that witnesses' own lawyers verbally build rapport on a higher amount than the other parties to the proceedings. Defense counsel, on the other hand, were expected to psychologically distance themselves from witnesses and to show a more confrontational distanced communication pattern.

3 EMPIRICAL STUDIES

Below, the two studies underlying this doctoral thesis are presented consecutively. First, the study investigating witnesses' testimonies depending on different interviewers is reported, and second, the study examining how interviewers linguistically accommodate witnesses is presented.

3.1 Witness Accounts Are Related to the Different Interviewers – Results from the Khmer Rouge Trials

A modified version of the manuscript “Witness Accounts Are Related to the Different Interviewers – “Results from the Khmer Rouge Trials” was published with the title “Do Testimonies of Traumatic Events Differ Depending on the Interviewer?” in “The European Journal of Psychology Applied to Legal Context” in January 2013. The copyright of the manuscript, including the reproduction of the paper in all forms and media, has been transferred to the publisher. The manuscript can be found online.

Brönnimann, R., Herlihy, J., Müller, J., & Ehlert, U. (2013). Do Testimonies of Traumatic Events Differ Depending on the Interviewer? *The European Journal of Psychology Applied to Legal Context*, 5, 97–121.

3.2 Linguistic Features of Rapport Building in Legal Interviews – Results from the Khmer Rouge Trials

After an introduction the method and results are reported, before a discussion embedding the results in a theoretical background is provided.

3.2.1 Introduction

Lawyers' questions, and their verbal utterances in general, influence the accuracy of witness accounts and it is not always the interviewer's intention to interview witnesses in a manner that maximizes their chances of providing accurate testimony. Defense lawyers conducting cross-examination, for example, may ask more credibility-challenging questions than prosecutors (e.g. Kassin, Williams, & Saunders, 1990; Hobbs, 2003). When witnesses change their answers due to the examiner's question styles and verbal behavior, an increased variability in witness answers can occur, which may result in untrustworthy testimony. In the

legal context, inconsistencies of interviewees' responses are strongly associated with a decreased credibility (Berman, Narby, & Cutler, 1995).

Studies have examined several factors that influence the quality of a legal interview, including factors relating to the interviewee, the interview context, and the interviewer (e.g. questioning techniques, social status, degree of bias) (Powel, Fisher & Wright, 2005). Interviewers in court carry a great responsibility, as they determine the probability of disclosure and thus the discovery of truth and the outcome of trials. An interviewer has the power to elicit false allegations (e.g., Bruck & Ceci, 1995; Wood & Garven, 2000), to determine accuracy and completeness of witness recall (e.g., Davies, Westcott, & Horan, 2000; HersHKovitz, Orbach, Lamb, Sternberg, & Horowitz, 2002; Lamb & Garretson, 2003), and to prevent the victim from disclosing altogether (e.g. Wood & Garven, 2000). Therefore, it is important to conduct a witness interview in a manner that is likely to produce the most accurate and detailed accounts of what happened. Obtaining the maximum quantity and quality of information from a witness is a complex task that involves a broad array of skills and competencies (Smith, Powell, & Lum, 2009).

Eliciting elaborate responses from witnesses strongly depends on maintaining effective, non-coercive questioning techniques. Questions solicit and convey information and focus, and can also inherently suggest answers (Kellermann, 2007). Witnesses are vulnerable to the wording of a question (Kebbell, Hatton, Johnson, & O'Kelly, 2001), with even subtle changes in the wording (e.g. *a* instead of *the*) potentially having major and profound effects on answers (Loftus & Zanni, 1975). Accordingly, it is generally agreed that the type of questioning employed in a legal interview is vital to the investigation. After reviewing research on question types in investigative interviews, Oxburgh, Myklebust, and Grant (2010) concluded that questions that most negatively affect accuracy and completeness of witness reports include leading questions, multiple questions, forced-choice and opinion/statements (which involves putting a statement to an interviewee rather than asking a question). On the other hand, there is general consensus among academic researchers that the most appropriate questions are open, information-seeking questions (e.g. questions that start with "Tell", "Explain", "Describe").

Interviewer roles have an influence on the questions a witness is asked. Different types of questions are put to witnesses, depending on whether the witness is undergoing "direct" examination or "cross-examination". Danet and Bogoch (1980) examined lawyer combativeness in six different trial transcripts and found that 87% of all cross-examination

questions were considered to be “highly coercive”, compared to 47% of direct examination questions. In another study, Kebbell, Deprez, and Wagstaff (2003) analyzed six transcripts of rape trials and found that cross-examining lawyers asked significantly more closed questions, heavily leading questions, and multiple questions than lawyers conducting direct examination. In direct examination, witnesses are treated more as discourse participants (Luchjenbroers, 1997), which explains the often cited view that “direct examination is the function of the *friendly* attorney and cross examination the function of the *unfriendly* one” (Walker, 1987, p. 67). Witnesses find the process of being cross-examined stressful and confusing (Flin, 1993), and when under pressure, they show high levels of suggestibility (Horselenberg, Merckelbach, & Josephs, 2003; Redlich & Goodman, 2003). In general, more dominant, distanced styles of questioning run the risk of provoking less reliable and biased witness reports, particularly when it comes to reporting stressful memories. Moreover, perceived authority seems to play a relevant role in this respect. Authority figures can cause anxiety and unease in vulnerable witnesses, which may result in them behaving in a compliant manner. Compliance can be related to an eagerness to please and/or to an avoidance of conflict and confrontation as a way of relieving distress (Gudjonsson, 1992). Furthermore, witnesses are more susceptible to leading questions when the interviewer is of a higher status (Roper & Shewan, 2002) – as the social distance between an interviewer and witness decreases (e.g. through a decrease in the level of formality), the impact of such biases is significantly reduced (King & Yuille, 1987).

Besides using an appropriate questioning technique, a further important interviewing skill is to establish rapport with the witness. Witnessing crime events can be traumatic and confusing, and speaking with legal professionals can be very intimidating. A key assumption is that a relaxed and comfortable witness will be more compliant and cooperative, which in turn will have a positive influence on memory retrieval, thus maximizing informativeness (Collins, Lincoln, & Frank, 2002). Rapport building may help witnesses to recall because it reduces anxiety at the time of retrieval (see Almerigogna, Ost, Bull, & Akehurst, 2007). Interviewers with a friendly demeanor are less influential than those with a more abrupt one (Bain & Baxter, 2000). A stressful interviewing style with a disbelieving stance, on the other hand, is likely to decrease the likelihood of a full disclosure. Subjectively experienced stress is thought to decrease attention, to reduce motivation, to interfere with efficient recall (Saywitz & Nathanson, 1993), and finally to decrease eyewitness performance (Loftus & Burns, 1982). Although a number of studies have established the benefits of rapport building with child witnesses (e.g. Carter, Bottoms, & Levine, 1996; Davis & Bottoms, 2002; Quas, Wallin,

Papini, Lench, & Scullin, 2005), to the best of the authors' knowledge, only two experimental studies have examined the positive effect of rapport building with adult witnesses (Collins, Lincoln, & Frank, 2002; Vallano & Schreiber Compo, 2011). These studies show that rapport building not only improves the quality of adult witness recall, but also significantly reduces the percentage of incorrect details reported, as well as the susceptibility to post-event misinformation. However, in these two studies, different kinds of rapport-building techniques – verbal and nonverbal strategies – were empirically tested. Yet, although rapport is considered a vital component of successful interviews, there are many different definitions of rapport, resulting in little consensus among researchers regarding the best way to establish rapport within an investigative interview setting.

In order to allow ecologically valid conclusions to be drawn about verbal interviewer behavior with traumatized witnesses, interviewers' verbal utterances to traumatized witnesses testifying at the Extraordinary Chambers in the Courts of Cambodia (ECCC) were examined. Witnesses who testified at the ECCC can be seen as a homogeneous vulnerable witness group. They share a common cultural heritage, speak the same language, and testified in the same court in similar circumstances. Witnesses were asked, in court, about their firsthand, highly traumatizing, experiences during the period of Democratic Kampuchea by four different parties to the proceedings. Several studies have found exceptionally high rates of posttraumatic stress disorder (PTSD) among Cambodians, reportedly between 11.2% (Sonis, Gibson, De Jong, Field, Dean, & Komproe, 2009) and 28.4% (de Jong, Komproe, Van Ommeren, El Masri, Araya, & Khaled, 2001). It can be assumed that traumatized witnesses may respond especially sensitively to an interviewer's questions due to a heightened sense of ongoing threat (Ehlers & Clark 2000) and that these witnesses in particular need rapport-building interviewers, who help them to create a safe, interactive environment which fosters the disclosure of traumatic experiences. The ECCC provides a suitable domain for analyzing how interviewers differ in their interviewing behavior, as a high number of interviewers in different legal roles are involved; they interview witnesses either as judges, as prosecutors, as civil party lawyers, or as defense counsel.

The task of the ECCC is to try senior members of the Khmer Rouge for war crimes committed between 1975 and 1979. Since the ECCC is closely modeled in procedural terms on the civil law system, the court adopted a predominantly inquisitorial approach. In the inquisitorial system, judges are not passive recipients of information but play a more active role in controlling the course of proceedings. They actively steer the search for evidence and

are empowered to put questions to the witnesses. As part of the ECCC process, many survivors provided testimony at the public hearing. The victims of the Khmer Rouge regime participated either as fact witnesses or as civil parties. The latter are legally represented by lawyers and participate in supporting the prosecution (Werner & Rudy, 2010). The statutory provisions and recent practice indicate that the judges question the witnesses first, followed by the co-prosecutors, the civil parties, and the defense (Petit & Ahmed 2010).

To summarize, several factors influence the quality of a legal interview, including factors relating to the interviewer (Powel et al., 2005). An interviewer's attempt and ability to build rapport with the witness can influence the likelihood of a full disclosure. When interviewing traumatized witnesses, a socially distant interviewing style (either due to confrontation purposes in cross-examination or due to authority and dominance of the interviewer) may be unhelpful for promoting a full disclosure.

Like other psychological phenomena, rapport building – or, conversely, social distancing – can be linked to word use. Linguistic features as reflected in quantitative analyses of word use can be used as an unobtrusive and ecologically valid measure of social processes (e.g. who has more status, whether somebody is being deceptive, and the quality of a close relationship) (see Tausczik & Pennebaker, 2010). The examination of patterns of natural language use in relation to psychological phenomena in social sciences has become faster, less complex, and less costly with the development of computer text analysis methods, such as the Linguistic Inquiry and Word Count, or LIWC (Pennebaker, Booth, & Francis, 2007). The LIWC is basically a sophisticated word counter, as it searches for and counts words within any given text file and scores them according to psychologically meaningful categories. It examines the linguistic style more than the content of verbal utterances. Research has demonstrated that the linguistic properties of the description of an event account for more of the variance in psychological outcomes than the actual content that is spoken or written (Campbell & Pennebaker, 2003). Using the LIWC, interviews can be analyzed objectively and consistently, and examined individuals are not constrained by biases such as social desirability. Linguistic analysis with the LIWC is an innovative and valuable research tool which can be used to analyze psychological states, such as cognitive processing and social orientation. Earlier studies have shown, for example, that the use of the first-person singular is a marker of self-disclosure (Tausczik & Pennebaker, 2010) and also a mechanism for reducing social distance (Diez, 1986; Donnellon, 1994). On the other hand, people higher in the social hierarchy use I-

words at much lower rates than less dominant people, but use first-person plural pronouns (the “royal we”) and second-person pronouns at a higher rate.

In conclusion, interviewers differ in their legal roles, which might be reflected in their communicative behaviors. This, in turn, can influence the quantity and quality of witness testimony. Legal professionals may differ in how they establish verbal rapport. Verbal rapport and social distance, respectively, correlate with certain linguistic markers, such as pronoun use. However, to date, little is known about word use in questions asked in legal interviews. Thus, this paper focuses on linguistic styles in the verbal utterances of different parties to the proceedings. In particular, it investigates how the questions of different interviewers in trial 001 in the Extraordinary Chamber in the Courts of Cambodia (ECCC) differ in terms of word use related to rapport building and social distancing according to a well-validated text analysis program, the Linguistic Inquiry and Word Count (LIWC). To the best of the authors’ knowledge, this is the first time the LIWC has been applied to the analysis of interviewers’ utterances in court in terms of psychological constructs such as rapport building. We hypothesize that law enforcement personnel (judges, prosecutors, civil party lawyers, defense counsels) differ in their linguistic patterns associated with regulating social distance. Further, we assume that witnesses’ own lawyers verbally build rapport more frequently than the other parties to the proceedings. Defense counsels, on the other hand, are expected to psychologically distance themselves from witnesses and to show a more confrontational, distanced communication pattern. Finally, we assume that judges’ communicative behavior is also more distanced than that of civil party lawyers, but that this is associated with a higher legal status rather than with a more confrontational, distanced communication style as is the case for defense counsels.

3.2.2 Method

3.2.2.1 Linguistic Inquiry and Word Count

The LIWC is a transparent text analysis program that categorizes and quantifies language use and scores words and word stems according to psychologically meaningful categories (Tausczik & Pennebaker, 2010). It counts the frequency of words (percentage of all recognized words) in 80 predefined categories, including linguistic processes (e.g., articles, prepositions), psychological processes (e.g., emotional, cognitive, and perceptual processes), words denoting relativity (e.g., time, space), and personal concerns (e.g., religion, work). Over 86% of the words people use in spoken and written comments can be captured by the

LIWC2007 dictionary (Pennebaker et al., 2007), the newest version available and the one used in this study. The dictionary consists of almost 4500 words and word stems. Across the categories, several language dimensions are straightforward, meaning that they are objective and based on grammatical rules. For example, the category of articles consists of three words: “a”, “an”, and “the”. Other, more subjective dimensions (e.g., words in the psychological processes and personal concerns categories) are based on a multistep rating procedure involving several trained raters (for details of this procedure, see Pennebaker et al., 2007). Most of the categories are arranged hierarchically. The word “rage”, for example, is sorted into the grand category of emotional process as well as into the subcategory of negative emotion words. The LIWC is especially suitable for examining differences in witness testimonies varying with different interviewers, because it is able to analyze vast quantities of transcribed verbal text in a very swift and economical manner.

The LIWC word categories have adequate psychometric properties (Pennebaker et al. 2007) and the use of the LIWC to measure psychological processes has increased in the past few years (Kahn, Tobin, Massey, & Anderson, 2007). Furthermore, the assumed analogy of different languages, with respect to the language style as assessed by the LIWC, has been empirically proven in a number of studies (Wolf, Horn, Mehl, Haug, Pennebaker, & Kordy, 2008; Ramirez-Esparza, Pennebaker, Garcia & Suria, 2007; Zijlstra, van Meerveld, van Middendorp, Pennebaker & Geenen, 2004). In the current study using the LIWC program (Pennebaker et al., 2007), different aspects of linguistic content and structure were analyzed: word use related to rapport building as well as to social distancing.

3.2.2.2 Measures of communication patterns

In the current study, LIWC language dimensions were used to isolate patterns of language use. To determine linguistic properties of rapport building, we relied on past research. One verbal rapport-building technique consists of interviewers disclosing personal information to the interviewees. In clinical settings, research has confirmed that therapist self-disclosure can successfully establish rapport between therapist and patient (e.g. Bedi, Davis, & Williams, 2005). However, self-disclosure is also recommended in the context of a criminal interview (Cognitive Interview; Fisher, & Geiselman, 1992), as it can act to personalize the interview (Vallano & Schreiber Compo, 2011). The relevant LIWC category associated with self-disclosure is the use of the first-person singular. The use of “I” as a mechanism for reducing social distance has been identified by several communication theorists (Diez, 1986;

Donnellon, 1994). “You” statements, on the other hand, are indicative of psychological distancing (Hahlweg, Reisner, Kohli, Vollmer, Schindler, & Revensdorf, 1984). Building rapport also includes behaving in a friendly manner, and acknowledging and agreeing with others’ ideas, attitudes, and values (Hine, Murphy, Weber, & Kersten, 2007). Verbally, this may be achieved by using agreeable language. Agreeable language was operationalized with the LIWC assent category, which includes word stems indicating agreeableness including alright, fine, indeed, ok, etc. Negative language was operationalized with the negation category, which consists of word stems indicating dissent or disagreement including doesn’t, isn’t, never, not etc. Furthermore, social and affective words can reveal whether a person is socially focused and his/her degree of emotionality. Expressions of negative emotions, for example, are likely to increase social distance. Positive emotions such as optimism, happiness, excitement, and elation, on the other hand, are associated with a willingness to approach a situation (Keltner, Gruenfeld, & Anderson, 2003; Watson, Clark, & Tellegen, 1988). The “social processes” category includes a large group of words that denote social interaction and refer to other people (e.g. they, she, us, talk, friend). Thus, this category may also be an indicator of rapport building between interviewer and witnesses.

A verbal factor associated with dominance is a low use of first-person singular pronouns. Within dyads, the person with the lower use of I-words tends to be the higher-status person (Chung & Pennebaker, 2007). Conversely, a lower-status person tends to use I-words at high rates. As described above, the use of the first-person singular has also been associated with more self-disclosure. This overlap is conceptually understandable as individuals with a higher status usually disclose less than lower-status individuals. Further measures to determine higher social status are an increased use of first-person plural pronouns (Kacewicz, Pennebaker, Davis, Jeon, & Graesser, 2009) and a high use of you-words (Pennebaker, 2011).

To summarize, we define verbal rapport building through a *cooperative questioning style* as consisting of a high use of the first-person singular, of positive emotion and social process words, as well as of words of the assent category. A socially distant verbal behavior due to a *confrontational question style*, on the other hand, should consist of a high use of second-person singular pronouns, of negative emotion words as well as of negations. Furthermore, we hypothesize that a socially distant verbal behavior due to high status and dominance is associated with a low use of first-person singular pronouns, a high use of the first-person plural, as well as a high use of second-person singular pronouns. In Table 3, the examined hypothesized constructs are listed and are illustrated by related categories and example words.

Table 3

Categories of the Linguistic Inquiry and Word Count related to verbal rapport-building and social distancing, abbreviation and examples (according to Pennebaker et al. 2007)

Hypothesized Construct	Category	Abbreviation	Examples
Rapport Building	High Use of First-Person Singular	I	I, me, mine
	High Use of Positive Emotion	posemo	Love, nice, sweet
	High Use of Social Process Words	social	Mate, talk, they, child
	Assent	assent	Agree, OK, yes
Social Distancing - <i>Associated with a Confrontational Interview Style</i>	High Use of Second-Person Singular	you	You, your, thou
	High Use of Negative Emotion	negemo	Hurt, ugly, nasty
	Negations	negate	No, not, never, isn't
Social Distancing - <i>Associated with Authority of Interviewing Party</i>	Low Use of First-person Singular	I	I, me, mine
	High Use of Second-Person Singular	you	You, your, thou
	High Use of First-Person Plural	we	We, us, our

3.2.2.3 Assessment of speech samples and description of subjects

The data are obtained from court trials dealing with atrocities committed during the period of Democratic Kampuchea. The case against Kaing Guek Eav, alias “Duch”, who was head of Security Prison 21 (S-21, Tuol Sleng), spanned a total of 77 days. It began on March 30, 2009, following an initial hearing on February 17, 2009. Substantive hearings came to an end on September 17, and closing submissions in Duch's case were heard from November 23 to 27, 2009. Transcripts of legal interviews were collected from the cambodiatribunal.org website. Transcripts are translated into English, although Cambodian legal professionals interviewed witnesses in their mother tongue, Khmer. The English translations of Khmer utterances of Cambodian interviewers together with the English utterances of international interviewers are therefore the foundation of the analysis (for a commentary on the translation process, please refer to the discussion section). Of the legal persons asking questions of the 24 witnesses, there were three Cambodian and two international judges (the Trial Chamber), three Cambodian and five international prosecutors, five Cambodian and five international civil party lawyers, as well as one Cambodian and two international defense counsels, resulting in 26 interviewers. Six of these interviewers were female and 20 were male. Male and female interviewers were equally distributed between the four parties to the proceedings.

Interviewer questions and statements to these 24 witnesses were first separated from transcripts of court proceedings and were copied into Microsoft Word files in order to process them with the LIWC (Pennebaker et al., 2007). As described previously, the LIWC is a computerized text analysis program that categorizes and quantifies word use. It counts the percentage of words in a text sample that fall into a given predefined category. As LIWC results are presented in terms of percentages rather than as raw counts, text samples of varying lengths can be compared with one another. In order to reduce dependency within the data, interviewer questions and statements were separated according to the respective witnesses. As the four parties to the proceedings consisted of a total of 26 interviewers, more than one interviewing speech sample per witness was obtained for one party to the proceedings (e.g., up to five speech samples per witness by all of the five judges asking questions at the ECCC). Processed LIWC results in linguistic categories of interest were statistically averaged in order to obtain one percentage value in one predefined LIWC category for each party to the proceedings. This resulted in four percentage values in one linguistic category in interviews to one witness by the four parties.

The 24 examined witnesses were on average 57 years old; three were female and 21 were male. Twenty-three witnesses were Cambodian citizens, while one person was not a Cambodian citizen but had lived in Cambodia during the period of Democratic Kampuchea. Seven witnesses gave their evidence as civil parties, whereas the remaining 17 witnesses testified as fact witnesses.

3.2.2.4 Statistical analysis

Interviewers' language use during interviews with different witnesses within the same party to the proceedings was averaged. Data analysis was performed using the SPSS software package (version 18.0; SPSS, Chicago, IL, USA). Normal distribution and homogeneity of variance were tested using a Kolmogorov-Smirnov test and Mauchly's test of sphericity, respectively. To examine differences in word use in interviewer statements depending on legal role, while simultaneously controlling for the fact that the same witnesses were interviewed by different parties to the proceedings, a repeated measures analysis of variance (ANOVA) was computed. In our study, repeated measures were the aggregated verbal utterances of the four parties to the proceedings (judges, prosecutors, civil party lawyers, and defense counsels) as nested within each witness. By applying this kind of analysis, systematic differences of language use as induced by certain features of the witness are controlled for. All reported results were

corrected by the Greenhouse-Geisser procedure where appropriate (Greenhouse & Junker, 1992). Effect sizes were reported as η^2 , which represents the proportion of total variance attributed to the independent variable, or as Kendall's W for nonparametric tests. Differences in dependent linguistic variables of interest that were not normally distributed were analyzed with nonparametric Friedman's ANOVA. When overall effects from Friedman's ANOVA were significant, post-hoc tests were performed with the Wilcoxon signed-rank tests; in cases where the overall effects of analysis of variance (ANOVA) were significant, two-tailed t-tests were conducted. Although there is an a priori expectation of directionality, two-tailed t-tests were conducted in order to satisfy a more conservative approach to statistical significance. T-tests and Wilcoxon signed-rank tests were accepted as significant only if their significance was less than $\alpha/6$, on adjustment for the number of analyses, meaning that they had a p value less than 0.0083.

3.2.3 Results

3.2.3.1 Verbal utterances of different parties to the proceedings

Table 4

Differences in linguistic variables related to parties to the proceedings (according to the analysis of the Linguistic Inquiry and Word Count)

	Trial Chamber Judges	Prosecutors	Civil Party Lawyers	Defense Counsel	Significance	Effect size
Word count	1547.23 (853.05)	541.60 (265.64)	514.44 (198.61)	580.43 (374.18)	$\chi^2(3)=28.582$ $p=0.000$	Kendall's W=0.433
I	0.692 (0.446)	1.060 (0.481)	2.101 (0.657)	1.479 (0.738)	$F(3/63)=24.897$ $p=0.000$	$\eta^2=0.542$
We	0.604 (0.279)	0.367 (0.390)	0.410 (0.294)	0.601 (0.371)	$\chi^2(3)=14.475$ $p=0.002$	Kendall's W=0.219
You	8.693 (1.349)	9.458 (2.245)	9.435 (1.730)	10.108 (1.864)	$\chi^2(3)=12.818$ $p=0.004$	Kendall's W=0.194
Negate	0.683 (0.302)	0.564 (0.346)	0.655 (0.282)	1.461 (0.871)	$\chi^2(3)=15.959$ $p=0.001$	Kendall's W=0.242
Social	17.343 (1.748)	17.649 (1.807)	19.473 (2.809)	18.925 (2.969)	$F(1.923/40.373)=5.154$ $p=0.011$	$\eta^2=0.197$
Affect	2.270 (0.523)	3.513 (1.108)	3.836 (0.802)	3.592 (1.351)	$F(2.247/47.189)=13.977$ $p=0.000$	$\eta^2=0.400$
Positive Emotion	1.451 (0.481)	2.397 (1.141)	3.046 (0.715)	2.471 (0.853)	$F(2.097/44.045)=13.859$ $p=0.000$	$\eta^2=0.398$
Negative Emotion	0.943 (0.395)	1.341 (0.600)	1.285 (0.527)	1.329 (0.730)	$F(3/63)=2.776$ $p=0.048$	$\eta^2=0.117$
Assent	0.057 (0.076)	0.084 (0.154)	0.056 (0.105)	0.054 (0.101)	$\chi^2(3)=2.507$ $p=0.414$	Kendall's W=0.038

Due to the fact that one witness was not interviewed by the prosecution and another witness was not interviewed by the defense counsels, interviews with these two witnesses were excluded. Therefore, speech samples of interviews with 22 witnesses were analyzed. All of the 22 witnesses underwent four conditions in the exact same order: interview by judges, by prosecutors, by civil party lawyers, and by defense counsels. The sample consists of verbal utterances of the four parties to the proceedings to six civil parties and 16 fact witnesses.

Verbal utterances of judges, prosecutors, civil party lawyers, and defense counsels to witnesses differed significantly in terms of their total word count ($\chi^2(3) = 28.582, p = 0.000$) (see Table 4).

Judges' interviews comprised a significantly higher number of words than interviews by prosecutors, civil party lawyers, and defense counsels. In the examined categories related to verbal rapport building with the witness, significant differences in verbal content were found for the use of the first-person singular ($F(3/63) = 24.897, p = 0.000, \eta^2 = 0.542$), Kendall's $W = 0.194$), of social process words ($F(1.923/40.374) = 5.154, p = 0.011, \eta^2 = 0.197$), and of positive emotion words ($F(2.097/44.045) = 13.859, p = 0.000, \eta^2 = 0.398$). In categories relating to psychological distancing, significant differences were detected in the use of the second-person singular ($\chi^2(3) = 12.818, p = 0.004$), of negations ($\chi^2(3) = 15.959, p = 0.001$, Kendall's $W = 0.242$), of negative emotion words ($F(3/63) = 2.776, p = 0.048, \eta^2 = 0.117$), as well as of the first-person plural ($\chi^2(3) = 14.475, p = 0.002$, Kendall's $W = 0.219$).

3.2.3.2 Verbal rapport building

First-person singular: Interviews containing first-person singular words significantly differed in relation to the interviewer roles. The most first-person singular words were used in interviews by civil party lawyers. Post-hoc analysis showed significant differences in the use of first-person singular words in the verbal utterances of judges and prosecutors ($t(21) = -3.121, p = 0.005, r = 0.563$), of judges and civil party lawyers ($t(21) = -7.342, p = 0.000, r = 0.848$), of judges and defense counsel ($t(21) = -4.682, p = 0.000, r = 0.715$), of prosecutors and civil party lawyers ($t(21) = -6.251, p = 0.000, r = 0.806$), and of civil party lawyers and defense counsel ($t(21) = 3.088, p = 0.006, r = 0.559$).

Social process words: Significant differences in the use of social process words were found between judges and civil party lawyers. The latter used significantly more social process words in their interview with witnesses than did judges ($t(21) = -4.281, p = 0.000, r = 0.682$).

Positive emotion: The most positive emotion words were found in the utterances of civil party lawyers. Post-hoc tests revealed significant differences in the use of positive emotion words between judges and prosecutors ($t(21)=-4.130$, $p=0.000$, $r=0.669$), between judges and civil party lawyers ($t(21)=-9.692$, $p=0.000$, $r=0.904$), as well as between judges and defense counsels ($t(21)=-4.876$, $p=0.000$, $r=0.729$).

Assent: Regarding the use of assent words, no significant differences in the verbal utterances of the four parties to the proceedings could be detected.

3.2.3.3 Social distancing

First-person singular: Interviews containing first-person singular words significantly differed in relation to the interviewer roles. Judges used the fewest I-words. Post-hoc analysis showed significant differences in the use of first-person singular words in the verbal utterances of judges and prosecutors ($t(21)=-3.121$, $p=0.005$, $r=0.563$), of judges and civil party lawyers ($t(21)=-7.342$, $p=0.000$, $r=0.848$), of judges and defense counsels ($t(21)=-4.682$, $p=0.000$, $r=0.715$), of prosecutors and civil party lawyers ($t(21)=-6.251$, $p=0.000$, $r=0.806$), as well as of civil party lawyers and defense counsel ($t(21)=3.088$, $p=0.006$, $r=0.559$).

Second-person singular: The most second-person singular words were found in interviews by defense counsels. Post-hoc tests revealed differences between the verbal utterances of judges and civil party lawyers ($z=-2.873$, $p=0.003$, $r=-0.433$), and of judges and defense counsels ($z=-2.776$, $p=0.004$, $r=0.418$).

First-person plural: Speech samples from different parties to the proceedings significantly differed in the number of first-person plural words. Significant differences in post-hoc analyses were found between judges and civil party lawyers ($z=-2.808$, $p=0.004$, $r=0.423$), indicating that compared to civil party lawyers, judges used significantly more first-person plural words.

Negation: Defense counsels used the most negation words in their interviews. They used significantly more words of this category than judges ($z=-3.198$, $p=0.001$, $r=-0.482$), prosecutors ($z=-3.285$, $p=0.000$, $r=0.495$), and civil party lawyers ($z=-3.555$, $p=0.000$, $r=-0.536$).

Negative Emotion: No significant differences in the use of negative emotion words between interviews by judges, prosecutors, civil party lawyers, and defense counsels were found.

3.2.4 Discussion

3.2.4.1 Verbal rapport building

This study demonstrated that when interviewing traumatized witnesses in a naturalistic setting such as the ECCC, different parties to the proceedings differ in their verbal rapport building as measured with the LIWC, a well-validated text analysis program. As hypothesized, law enforcement personnel (judges, prosecutors, civil party lawyers, defense counsels) differ in their linguistic patterns associated with both rapport-building and social distance. Results from this field study indicate that witnesses' own lawyers verbally built rapport more intensively than the other parties to the proceedings. Civil party lawyers used the most first-person singular pronouns – significantly more so than judges, prosecutors and defense counsel. Furthermore, civil party lawyers used the most words out of the social process category – significantly more so than judges. In addition, civil party lawyers verbally expressed significantly more positive emotions than judges. In sum, civil party lawyers' language use hints at more personal, less distant and dominant, and thus less stress-inducing interview styles in the first ECCC trial.

The strongest interviewer role effect was found for the use of first-person singular words. As mentioned previously, the use of first-person singular words is indicative of healthy communication patterns, such as self-disclosure and verbal immediacy (Hahlweg et al., 1984; Rankin-Esquer, Burnett, Baucom, & Epstein, 1997; Williams et al., 2007). Self-disclosure, defined as “any information about oneself that a person verbally communicates to another person” (Collins & Miller, 1994, pp. 458), has commonly been considered by theorists to be a central factor in closeness/intimacy (Laurenceau, Rivera, Schaffer, & Pietromonaco, 2004). The effects of self-disclosure as a rapport-building technique have recently been experimentally examined (Vallano & Schreiber Compo, 2011). In this experimental study, verbal rapport building involved a uni-directional rapport building condition in which the interviewers invited the participant to self-disclose personal information (without interviewer self-disclosure) and a bi-directional rapport-building condition (the interviewer invited witness self-disclosure while also disclosing personal information about him/herself). The researchers did not find additional witness recall benefits in the uni-directional condition when compared to only interviewee self-disclosure. However, participants in the condition in which interviewers disclosed personal information perceived the interviewers as friendlier than participants in a no-rapport condition, indicating a more subjective rather than an objective benefit of self-disclosure.

In the current study, moreover, small to medium effects were found for legal role-dependent differences in the use of social process and positive emotion words. Civil party lawyers used the most words out of the social process category. They used significantly more social process words than judges. Social words are words that make reference to other people. Generally, people who use a high number of social words are more socially connected with others (Pfeil, Arjan, & Zaphiris, 2009). Furthermore, research suggests that the use of such words increases to the extent that social relationships are central to one's self-concept (e.g., Pressman & Cohen, 2007). In addition, civil party lawyers verbally expressed significantly more positive emotions than judges. As positive affectivity and sociality are related (Waugh & Fredrickson, 2006), and expressing positive emotions can also be an indicator of rapport building, it can be concluded that civil party lawyers verbally built up the most personal social interaction with traumatized witnesses at the ECCC.

As the current study only examined verbal markers of interviewers' rapport building, it remains unclear whether interviewers also differ in terms of non-verbal rapport building. In the experimental study by Collins, Lincoln, and Frank (2002), non-verbal rapport-building strategies for memory retrieval were tested. Following an interview in the rapport mode (with an interviewer speaking with a gentler tone, referring to the participants by name, adopting a more relaxed body posture, and generally being friendlier), participants freely recalled more accurate information about a videotaped real-life stimulus event than participants in a neutral and an 'abrupt' condition.

3.2.4.2 Social distancing

Defense counsels were expected to distance themselves from witnesses due to a more confrontational question style. The results in the related LIWC categories support this assumption. Thus, the most second-person singular words were found in interviews by defense counsels, and they used significantly more you-words than judges. Furthermore, in the verbal utterances of defense counsel, significantly more negations could be detected than in the verbal utterances of the other parties to the proceedings. This socially distanced communication pattern of defense counsel can be linked with research on the cross-examination process in court. Defense counsel communication behavior may be seen as an expression of their confrontational, credibility-challenging, and intimidating question style. In an attempt to discredit their testimony, witnesses undergoing cross-examination are accused, either indirectly or directly, of lying (Brennan & Brennan, 1988; Davies, Henderson, &

Seymour, 1997; Zajac, Gross, & Hayne, 2003) and are therefore frequently asked credibility-challenging questions. A confrontational or credibility-challenging question style may distort witnesses' testimony rather than facilitate it because witnesses' suggestibility increases when they perceive the interviewer as intimidating (Jackson & Crockenberg, 1998).

The linguistic indication of social distancing due to authority and dominance was interpreted as a low use of first-person singular and a high use of second-person singular and first-person plural pronouns. The hypothesis that judges show a linguistic pattern that is most associated with authority and dominance was partially supported. In their interviews with witnesses, judges used significantly fewer I-words than all other parties to the proceedings. A high use of second-person singular pronouns, on the other hand, was not found. Compared to civil party lawyers and defense counsels, judges used significantly fewer you-words. First-person plural pronouns, however, were detected in a high number of judges' verbal utterances. They used the most we-words – significantly more than civil party lawyers. Contrary to a first notion, we-words are not imperative for reflecting a speaker's close emotional ties to others. People with a higher status and who are secure in their position use more first-person plural pronouns because they focus on the group rather than on themselves. The “we” is then used in a distancing or “royal-we” form (Chung & Pennebaker, 2007). Our results show that judges use two of the three examined linguistic manifestations of power. Consciousness of social hierarchy is very strong in Cambodian society, and this affects the communication behavior of socially dominant people as well as interpersonal communication styles in general (Hinton, 1998). Cambodian witnesses may change the way in which they communicate depending on the status of interviewers. Since judges can be seen in hierarchical terms as being at the top level of legal personnel, they have to be treated with the most respect, and an increased social distance in the interview situation can be assumed. Baxter and Boon (2000) demonstrated that an increase in psychological distance between an interviewer and an interviewee is positively associated with an increase in interrogative suggestibility. Furthermore, authority, status, and power may lead to a state-dependent filtering of information. Witnesses may want to conform to requests made by judges in order to please them or to avoid conflict and confrontation. The witness thus tends to concentrate more on managing his or her relationship with the interviewer than on giving accurate answers.

3.2.4.3 Association between interviewers' word use and witness accounts

Due to its naturalistic setting, accuracy and completeness of witness recall could not be examined in this study. Thus, it is not possible to claim that civil party lawyers' verbal rapport building promoted more accurate or complete testimonies. However, in a previous study, we found that linguistic style differences in witness testimonies varied with the interviewing parties to the proceedings (Brönnimann, Herlihy, Müller, & Ehlert, 2013). Witnesses differed in verbal expression of affective, cognitive, and perceptual processes and in terms of actual word count according to the LIWC. When interviewed by civil party lawyers, witnesses verbally expressed more emotions, and in particular more negative emotions such as anxiety, more cognitive process such as causation words, and more perceptual process words such as "feel", relative to when they were interviewed by judges. Witnesses thus seemed to be affectively and cognitively more activated during the interview with their own lawyers. We suggested that these results might be associated with a prior supportive relationship between civil party lawyers and witnesses, which helped witnesses to impart more personal information, draw more attention to themselves and their emotions, and immerse themselves more fully in their trauma. However, results from the current study suggest that expressing more emotions, cognitions and perceptions may also be linked to a heightened verbal rapport-building by civil party lawyers during the court examination itself.

On the other hand, our previous study also found an increased use of cognitive process words in answers to defense counsels, compared to the answers given to judges (Brönnimann et al., 2013). This was interpreted as reflecting a higher cognitive activation due to a more interrogative question style by the defense counsel, who attempts to undermine the credibility of the witness. This assumed interrogative questioning style by defense counsel can now be linked to a more socially distanced interviewing style.

3.2.4.4 Limitations

Some limitations to our study should be taken into account. First of all, the Khmer Rouge tribunal is trilingual. For reasons of consistent evaluation, the English translations of Khmer interviews formed the foundation of the analysis. Due to the translation process from Khmer into English, a loss of information can be assumed. Therefore, Cambodian interviewers' utterances should have also been analyzed in their native language, but at present no Khmer-LIWC dictionary exists.

A further limitation of the study concerns the constraints of the applied methodology. Due to the within-participants design used as the statistical analysis in this field study, order effects need to be taken into account. The order of interviews was determined by the ECCC and did not vary. As a result, these effects could not be equalized across interviews by the principle of counterbalancing (Jackson, 2011). Finally, the small sample size of the study ($N = 24$) was determined by the facts of the court proceedings and constitutes an additional reason why the current study should be replicated and extended.

3.2.4.5 Conclusion

Although most investigative interviewing guidelines recommend the use of rapport-building, and a number of experimental studies have established the benefits of rapport-building with adult witnesses (Collins, Lincoln, & Frank, 2002; Vallano & Schreiber Compo, 2011), there is little consensus among researchers regarding the best way to establish rapport within an investigative interview setting. Traumatized witnesses may particularly benefit from rapport building. There are no studies from the field examining verbal rapport building with traumatized adult witnesses by different legal professionals. This study pursues this comparative approach in order to provide some preliminary indications of the linguistic mechanisms by which rapport-building might be achieved in a court setting.

In this study, different parties to the proceedings differed in their verbal rapport-building as well as in their linguistic markers of social distancing. In particular, civil party lawyers showed the highest rapport-building with witnesses. Defense counsel, on the other hand, showed a more socially distanced communication pattern than the other parties to the proceedings. Verbal markers associated with authority and dominance were detected most frequently in interviews by judges. Judges in Cambodia have a higher status compared to other legal professionals. They will therefore be treated with the most respect, which in turn may increase their social distance from witnesses. Social rapport and social distance, respectively, between interviewers and interviewees have been shown to be factors that influence the likelihood of a full disclosure and the quality of a legal interview (Collins, Lincoln, & Frank, 2002; Vallano & Schreiber Compo, 2011). Although accuracy and completeness of witness recall could not be examined in this field study, in a previous study (Brönnimann, Herlihy, Müller & Ehlert, 2013), linguistic style differences in witness testimonies varied with the interviewing parties to the proceedings. It can be assumed that when interviewed by their own civil party lawyers, who verbally built rapport more

frequently, witnesses imparted more personal information and immersed themselves more fully in their trauma. When interviewed by verbally more socially distanced defense counsel, witnesses are cognitively more activated, possibly due to a more interrogative questioning style which confronts witnesses with assumed contradictions.

In a naturalistic setting such as the ECCC, witness testimonies differ depending on different interviewer roles. Witnesses testify differently when interviewed by judges, prosecutors, civil party lawyers, and defense counsel. As Berman, Narby, and Cutler were able to show experimentally back in 1995, differences in testimonies can result in a decreased credibility of interviewed witnesses.

4 GENERAL DISCUSSION

Victims' credibility as witnesses is crucial for successful prosecution. However, credibility strongly relies on the ability of the witnesses to remember and communicate coherently and consistently in court about the possible horrific experiences they suffered (Herlihy & Turner, 2009). Since inconsistency in disclosure has implications for credibility, variability in witness accounts due to interviewer behavior within the investigative interview becomes an important issue. Interviewers differ in how they accommodate and interview witnesses depending on their legal role. However, little attention has been paid so far on how different parties to the proceedings interview traumatized witnesses and on variability in witnesses' accounts in relation to different interviewers in the field of international criminal trials using an predominant inquisitorial procedure, such as the ECCC. For that reason, the two above presented empirical studies have been undertaken.

This final chapter provides a summary of the main results of the empirical studies, followed by a discussion and integration of the findings within a broader research context and subsequently addresses the methodological limitations and strengths of the studies. In the final section, suggestions for future research are considered.

4.1 Summary of the Results

Below, a brief overview is provided of the findings of the linguistic analyses of the investigative interviews at the ECCC.

4.1.1 Witness accounts are related to the different interviewers – Results from the Khmer Rouge Trials

By analyzing speech samples of 24 witnesses with the LIWC, the influence of the legal role of the questioner on witness testimonies was examined in our first empirical study. Variability in witness testimonies is often assumed to be attributable to the style of questioning and the behavioral, social and psychological attributes of the interviewer, giving rise to inconsistencies and to unreliability of witness testimonies. The foundation of the analyses was the English translations of the original Khmer testimonies. The LIWC analysis of trial 001 showed, consistent with our predictions, that differences in witness testimonies were related to the different interviewing parties to the proceedings. Verbal expressions of affective, cognitive, and perceptual processes differed according to whom (judges, prosecutors, civil

party lawyer, or defense; but also male vs. female interviewer and national vs. international interviewer) was interrogating the witness at the time. Main differences in testimonies were found between interviews by judges and civil party lawyers, and between interviews by judges and defense counsel. When interviewed by civil party lawyers, witnesses verbally expressed more emotions, more cognitive process words, and more perceptual process words, relative to when they were interviewed by judges. However, also in answers to defense counsel, an increased use of affective process words as well as an increased use of cognitive process words could be found in comparison to the answers given to judges.

4.1.2 Linguistic features of rapport building in legal interviews – Results from the Khmer Rouge trials

To examine how parties to the proceedings differ in their communication patterns to traumatized witnesses in terms of verbal rapport building and social distancing, speech samples of 26 interviewers were run through the LIWC. Results show that when interviewing traumatized witnesses in a naturalistic setting such as the ECCC, different parties to the proceedings (judges, prosecutors, civil party lawyer, or defense counsel) differ in their use of words that are related to verbal rapport building and social distancing. In three out of five research based linguistic markers of social rapport building, namely in the use of first-person singular words, of positive emotion and social process words, differences between civil party lawyers and the other parties to the proceedings were found, indicating that witnesses' own lawyers verbally build rapport more intensively than the other parties to the proceedings. Furthermore, results in related LIWC categories support the assumption that defense counsel verbally distance themselves more from witnesses than the other parties to the proceedings. In particular, most second-person singular words were found in interviews by defense counsel, and they significantly used more you-words than judges. Additionally, in verbal utterances of defense counsel, significantly more negations could be detected than in verbal utterances of the other parties to the proceedings. The hypothesis that judges show a linguistic pattern the most associated with authority and dominance have been partially confirmed. In their interviews with witnesses, judges use significantly fewer I-words than all the other parties to the proceedings and significantly more we-words than civil party lawyers. A high use of second-person singular pronouns, however, could not be found.

4.2 Integration of the Current Findings

Witness examination is a topic of research that provides a lot of interesting data that can be analyzed from different perspectives. This work is, however, the first field study that analyzes investigative interviews with traumatized witnesses in an international criminal trial from a linguistic perspective with an innovative computerized content analytic approach. In the following, the main findings of the two empirical studies that were presented in the current thesis will be discussed and embedded into a broader research context.

Trauma and other posttraumatic sequelae can impact witness' memory and ability to testify in court. Traumatized witnesses at the ECCC therefore face particular problems in testifying effectively. According to Gudjonsson (2006, 2010), such witnesses can be described as vulnerable. Therefore, they have to be interviewed in a manner that helps them in giving accurate accounts of what they have experienced. One effective way to obtain accurate witness information is to establish rapport respectively to use rapport-building techniques in interviews (Collins et al., 2002; Pinizzotto & Davis, 1996). Rapport building may help witness to recall because it reduces anxiety at time of retrieval (Almerigogna et al., 2007) as well as distress within the interview situation. However, there is no scientific consensus on what exactly constitutes rapport, and how it can be measured. In our empirical study we examined verbal rapport building measured with a subset of the LIWC dimensions. Based on relevant linguistic research, rapport building was conceptualized as including four linguistic markers: High use of first-person singular, high use of positive emotion words, high use of social process words, and high use of assent words. Social distancing associated with a confronting interviewing style, on the other hand, was measured by examining if interviewers use a high number of second-person singular words, a high number of negative emotion words, as well as a high number of first-person plural and negation words. Status (perceived or otherwise) of the interviewer also has an effect of rapport (Roper & Shewan, 2002; King & Yuille, 1987). Social distancing associated with authority of the interviewing party to the proceedings was measured by a low use of first-person singular, a high use of second-person singular, and a high use of first-person plural. Results of our analyses showed that judges, prosecutors, civil party lawyers, and defense counsel accommodate witnesses differently. They differ in their linguistic patterns associated with rapport building respectively social distance. In line with our hypothesis, witnesses' own lawyers verbally build rapport more intensively than the other parties to the proceedings. They used more first-person singular words – indicators of self-disclosure which in turn is a central factor in closeness/intimacy

(Laurenceau et al., 2004) – than the other parties to the proceedings. Civil party lawyers, compared to judges, furthermore, verbally expressed more positive emotion words and used more words that denote social interaction. It can be concluded that civil party lawyers' language use hints towards a more personal, less distant and dominant and thus a less stress inducing interview styles in the first ECCC trial. Rapport-building establishes harmony in the interview and leads to free narratives (Keats, 1993). Furthermore, studies have shown that rapport building has been associated with increased accuracy of witness report and decreased witness susceptibility (Collins et al., 2002; Vallano & Compo-Schreiber, 2012). However, these studies were experimental, and rapport building was conceptualized differently. In the study by Vallano and Compo-Schreiber (2012), verbal rapport building involved a uni-directional rapport building condition, where the interviewer invited the witness to self-disclose personal information (without interviewer self-disclosure) and a bi-directional rapport building condition (the interviewer invited witness self-disclosure while also disclosing personal information about himself). The non-verbal rapport building strategy by Collins et al.'s (2002) included interviewers speaking with a gentle tone, referring to the participants by name, adopting a relaxed body posture, and generally being friendly. However, in our empirical study, verbal rapport building was measured with the well-validated LIWC, and results suggest that civil party lawyers verbally build rapport more intensively than the other parties to the court process. It is therefore not surprising that 71% of the Cambodia-resident civil parties who participated in Case 001 reported that they felt respected by their lawyer.

Although the ECCC work on the inquisitorial system and not on the adversarial one, the result that civil party lawyers verbally build rapport more intensively supports Luchjenbroers (1997) findings that in direct examination witnesses are treated more as discourse participants. Direct examination in our study can be understood as civil party lawyers' examination of victims of the alleged crimes who testified favorable to civil party lawyers' side and against the side of the defendant. Defense counsel, therefore, were expected to use a more distressing and confronting question style and to rather distance themselves from witnesses than to build rapport. Results in related LIWC categories support this assumption. Thus, most second-person singular words were found in interviews by defense counsel. Furthermore, in verbal utterances of defense counsel significantly more negations could be detected than in verbal utterances of the other parties to the proceedings. Defense counsel's social distanced communication behavior can be seen as an expression of their confrontational, credibility challenging, and intimidating interviewing style when questioning witnesses not testifying

favorable to their client, Kaing Guek Eav. This is in line with Ellison (2001), who states that cross-examination is often used as a tool to humiliate, intimidate, and confuse opposing witnesses. According to Valentine and Maras (2011), barristers in cross-examination attempt to undermine witnesses' confidence by extensively using social pressure on them, and Evans (1995) has noted in a popular training text for lawyers that the principle reason for cross-examination is "discrediting the evidence" (p. 150). In an attempt to discredit their testimony, witnesses undergoing cross-examination are accused, either indirectly or directly, of lying (Brennan & Brennan, 1988; Davies, Henderson, & Seymour, 1997; Zajac et al., 2003) and therefore are frequently asked credibility-challenging questions. Furthermore, during cross-examination more question formats are used that can limit the completeness and accuracy of the answer; including leading questions, use of negatives, yes/no questions, and multiple questions (Kebbell et al., 2003; Kebbell, Hatton & Johnson, 2004). In an additional study (results not presented within this thesis), we could support the higher use of inadequate yes/no-questions by defense counsel compared to the other parties to the court process at the ECCC. Furthermore, defense counsel, compared to prosecutors, asked significantly more suggestive forced-choice questions (Martinovic, Brönnimann & Ehlert, 2012). A social distanced or confrontational question style may distort witnesses' testimony rather than facilitate it because witnesses' suggestibility increases when they perceive the interviewer as intimidating (Jackson & Crockenberg, 1998). Witnesses testifying at the ECCC, however, may already be more suggestible as they have experienced a high number of negative life-events (Drake et al., 2008) and as they can be seen as prone for dissociative experiences (Merckelbach et al., 2000).

The hypothesis that judges show a linguistic pattern the most associated with authority and dominance have been partially confirmed. Results have shown that judges intensively used two of the three examined linguistic manifestations of power. They used significantly fewer I-words than all the other parties to the proceedings and significantly more we-words than civil party lawyers. People with higher status use more first-person plural pronouns because they focus on the group rather than themselves. The "we" is then used in a distancing or royal-we form (Chung & Pennebaker, 2007). The more distanced interviewing style by judges found in our linguistic analyses supports Ciorcari and Heindel's (2011) notion that ECCC judges in Case 001 sometimes sounded cold and mechanistic. However, they explain this fact that judges were responsible to impose procedural limits and to interrupt emotional testimonies due to efficiency concerns. According to Strasser, Poluda, Sotheara and Pham (2011), the trial chamber required the presentation of witnesses experience in a dry and factual way rather

than using witnesses' emotional accounts as a legitimate and important source of evidence to better understand the individual and the collective suffering due to the murderous regime. Civil party lawyers, therefore, argued on a number of occasions for the court to provide more time for witnesses to cope with emotional difficulties (see Ciorcari & Heindel, 2011). However, judges can be seen hierarchically as at the top level of legal personnel, and the very strong consciousness of social hierarchy in Cambodian society may increase perceived authority of judges even more. At the ECCC, judges have a very high status and, according to the LIWC, verbally express this with a socially distanced interviewing style. Research literature suggests that status of the interviewer can influence accuracy and completeness in the interview process. It can cause anxiety and distress, and witnesses may therefore be overly pressured to comply with the interviewer. This compliance can be related to an avoidance of confrontation as a way of relieving distress (Gudjonsson, 1992). Furthermore, witnesses are more susceptible when interviewed by persons of high status (Roper & Shewan, 2002). It is reasonable to assume that when interviewed by a social distancing judge, the interviewee may not have the impression that his story will be heard, accepted, and not judged. In interviews undertaken by Stover, Balthazard and Koenig (2011), civil parties who testified at the ECCC tended to express the most dissatisfaction with the ECCC when they perceived that either the judges or defense lawyers were failing to respect their interests, were showing favoritism to the accused, or were adopting measures that restricted their role and the role of their lawyers in the courtroom. This was particularly evident near the end of the trial when a group of 28 civil parties boycotted the proceedings for a week (Letter of civil parties in case 001 to the president of trial chamber, 2009). The incident happened when the chamber determined that the civil party lawyers were not allowed to question the accused or witnesses called by the defense to testify about Duch's character, nor to make submissions on sentencing.

Employing two or more interviewers in an investigative interview is common practice. In Case 001 at the ECCC, up to 26 persons interviewed the witnesses. This can be advantageous as several interviewers may be more efficient and allow for individual differences of interviewer techniques. Some manage better to create a warm and trusting atmosphere (which in turn may increase quality of witness accounts), whereas other interview more cold and mechanistic. However, as the results of the other study undertaken "Witness accounts are related to the different interviewer – Results from the Khmer Rouge trials" show different interviewers can lead to variability in witness accounts that in turn may negatively influence credibility. Verbal expressions of affective, cognitive, and perceptual processes differed according to whom was interrogating the witness at the time. When interviewed by civil party

lawyers, witnesses verbally expressed more emotions and cognitions than when interviewed by judges and prosecutors, suggesting that witnesses and civil parties may have been affectively and cognitively more activated during the interview with their own lawyers. When the memory of a negative emotional episode is accessed, the physiological and sensory components of the corresponding emotions are activated as well (Bower, 1981; Lang, 1983; Leventhal, 1984). Holmes et al. (2007) found that using more emotion words to describe experienced traumatic events is associated with increased perceptual feelings. In addition, the stronger processing of emotions is associated with a greater cognitive processing of the traumatic experiences. Boals and Klein (2005) consider that the use of cognitive words reflect an active search for meaning and understanding of a traumatic event. Specifically the employment of causal words can be seen as a marker of the extent to which an individual is going through the process of organizing his thoughts about an event and attempting to create causal connections. Thus, the higher cognitive, emotional, and perceptual activation during the interview by civil party lawyers may reflect a better ability or greater willingness to engage in the processing and reactivating of the trauma in this interview situation. This can be seen as a result of a prior trusting relationship between witnesses and these lawyers and/or – as we have learned – of a heightened verbal rapport building of civil party lawyers during the legal interview itself. Fifteen of the seventeen Cambodia-resident civil parties who testified in case 001 said that their lawyer had helped them to prepare (Pham et al., 2011). Due to this relationship and/or due to the establishment of verbal rapport within the investigative interview, witnesses may have therefore imparted more personal information, drawn more attention to themselves and their emotions, and immersed themselves more fully in their trauma, which is associated with higher perceptual feelings (reflected in the higher use of feeling words).

Witnesses used the least affective, cognitive, and perceptual process words in answers given to judges. This suggests that witnesses at this stage do not promote an active search for meaning and understanding of the traumatic events experienced and avoid immersing themselves in them. They appear to recount their facts without engaging in the processing of the trauma itself. Witnesses may be cognitively and affectively blocked due to the very high hierarchical position of the judges and the related distanced communication pattern. Witnesses may want to conform to requests made by judges in order to please them or to avoid conflict and confrontation. The witness tends to concentrate more on managing his relationship to the interviewer as opposed to giving accurate answers.

In answers to defense counsel, an increased use of emotional and cognitive process words could be found in comparison to answers given to the questions asked by judges. This increased use of cognitive process words may reflect a higher cognitive activation due to a more socially distanced and interrogative question style by the defense counsel, who attempts to undermine the credibility of the witness. When confronting witnesses with possible contradictions, a high cognitive load is required to maintain a report against accusations of not telling the truth. Witnesses are forced to create causal explanations to organize their testimonies. Due to the confrontation with presumed inconsistencies, witnesses have to differentiate between multiple competing solutions. To a certain extent, defense counsel's confrontation of facts of witnesses' traumatic experiences can also be compared with exposure to trauma-related stimuli. During interviews by defense counsel, witnesses may be confronted to a higher degree with trauma-related stimuli than when interviewed by judges. They may therefore more intensely engage with their traumatic memories. This process is again associated with a stronger affective engagement.

Results of the two empirical studies undertaken show that parties to the court process differ in how they accommodate and interview witnesses. This in turn affects witnesses' testimonies by influencing witnesses' cognitive, affective, and perceptual activation. At the end, witnesses' testimonies given in different investigative interviews during the court proceedings may therefore be perceived as inconsistent. In the legal context, inconsistencies of interviewee's responses are strongly associated with a decreased credibility (Berman et al., 1995; Brewer et al., 1999). However, it is not clear what exactly constitutes inconsistency. Fisher et al. (2009) overviewed the results of 19 empirical studies that examined the relation between inconsistency and accuracy of eyewitness recollection under controlled laboratory conditions. Each of the examined experiments conformed to the following general procedure. Witnesses (typically college students) either watched a videotape of a simulated crime, and most witnesses then were tested twice to assess their memories of the event. Witness statements across the two interviews were compared and categorized as one of four types: Consistent (same answer at time 1 and time 2), contradiction (contradictory answers at time 1 and time 2, reminiscent (no answer at time 1, but witness provided an answer at time 2), and forgotten (witness provided an answer at time 1 but did not answer at time 2). The authors concluded that, in general, witnesses who make more inconsistent statements (whether contradictions, reminiscences, or a combination of the two) are not much less accurate than witnesses who are consistent, but they are perceived as less credible. This review indicates that inconsistency is not uniformly defined. Thus, it is not yet clear to what extent variability

in witness accounts constitutes for inconsistency. Further research is needed to differentiate between “normal” variability and “atypical” inconsistency that influences witness credibility. It is not clear if and how various emotional and cognitive states of witnesses during the court proceeding contribute for perceived inconsistency. Vrij and Fisher (1997) found in an experimental study about rape victims that the type of emotion displayed did affect male observers, who judged an angry victim as less distressed and less reliable than a sad victim. However, what would happen with perceived credibility if the victim first showed one type of emotion (e.g., anger) and then later expressed another one (e.g., sadness)?

4.3 Strengths and Limitations of the Empirical Studies

In both studies, linguistic analyses have been undertaken with the well-validated LIWC. No study to date has examined investigative interviews in a criminal international trial with this instrument. Through LIWC, investigative interviews in the ECCC could be analyzed objectively and consistently, and examined individuals were not constrained by demand characteristics and biases such as social desirability. Furthermore, analyzing real investigative interviews in the field addresses the actual conditions which witnesses endure. Compared to non-participatory unaffected witnesses in experimental studies, ECCC witnesses have experienced real trauma and were in a state of high emotional arousal and distress when accounting about their suffering during the Khmer Rouge period. Results, therefore, have a high ecological validity. It could be furthermore assumed that traumatized witnesses at the ECCC may respond with a particular sensitivity to questions of the interviewer due to a heightened sense of ongoing threat (Ehlers & Clark, 2000), making these witnesses very well-suited to examine the influence of different interviewers on witness testimonies. Analyzing how witness accounts are influenced by different interviewers was additionally facilitated at the ECCC as a high number of different interviewers were involved.

Nevertheless, some limitations to the studies must be considered. First of all, the Khmer Rouge tribunal is trilingual – the official court languages are Khmer, English, and French. However, the English translations of the predominantly Khmer interviews were the foundation of the analysis for reasons of consistent evaluation. Yet, due to the translation process, a loss of information can occur, and with translation one can never be absolutely sure if the message is an accurate account of the original speaker, or if it also reflects to a certain degree the psychological makeup of the translator. Additionally, translations were not validated by, for example, applying a back-translation method. However, the assumed

analogy of different languages, if it comes to the language style as assessed by the LIWC, has been proven empirically for several times (Wolf et al., 2008; Ramirez-Esparza et al., 2007; Zijlstra et al., 2004). Furthermore, in terms of the ecological validity of the study, multilingual international tribunals, where different languages meet, are a reality.

Further limitations of the study are constraints concerning the method applied. First, the broad limitation of the LIWC should be considered. Although it has been extensively used and reliably validated in a variety of communication environments, some weaknesses remain. For instance, LIWC cannot be used to capture neither syntax and context information nor irony or sarcasm. Second, because a within-participants design was used as the statistical analysis in both empirical studies, order effects have to be taken in to account. The order of interview was determined by the ECCC and did not vary. As a result, it is not feasible to equalize effects across interviews by the principle of counterbalancing (Jackson, 2011). Furthermore, it is clearly a disadvantage of naturalistic observation in field studies that it is not possible to control for all the variables. Thus, unmeasured and uncontrolled variables may be involved and to certain degree confounding of the results has to be taken into account. However, field studies are excellent to examine natural occurring (verbal) behavior in legal context as they are representative of the conditions the interviewers and witnesses actually face. Our data from interviews conducted at the ECCC represent a degree of realism and a range of variables impossible to simulate in a laboratory setting. Third, the small sample size of the study ($N = 24$) has to be taken into account. However, it was determined by the actual case respectively the facts of the court proceedings. Therefore, we acknowledge running the risk of formulating general conclusions from a limited data set. However, the aim of our empirical studies was not to provide an overarching theory about the effects of investigative interviews with traumatized witnesses by different legal parties to the proceedings but just to examine accommodation of interviewers and investigate variability within witnesses' testimonies in order to raise awareness of the resulting possible disadvantages for credibility issues.

4.4 Conclusions and Directions for Future Studies

To the best of our knowledge, this is the first research project to examine investigative interviews in an international criminal trial from a linguistic perspective with the innovative and well-validated LIWC. In conclusion, our findings suggest that different interviewers accommodate witnesses differently. According to their legal role, they either verbally build rapport or socially distance themselves from the witness. Additionally, traumatized witnesses

differ in their use of emotional, cognitive, and perceptual process words respectively in the way they testify depending on the different interviewers.

Future research should examine if and how this variability in witness testimonies due to the different interviewers is perceived as inconsistent. It is not clear if the terms ‘variability’ and ‘inconsistency’ can be used interchangeably with regard to witness accounts. In this regard, it would be interesting to examine inconsistency ratings of witness accounts and link them with credibility ratings of witnesses by, for example, monitors of international criminal trials. The investigation of the perceived credibility of witness accounts during interviews by different legal professionals might be interesting. Our findings of inconsistencies in witness testimonies due to different interviewers could then be linked with changes in perceived credibility, and the notion of a strong relationship between inconsistency in witness account and witness credibility could be further clarified.

Furthermore, the assessment of PTSD symptoms and symptoms related to other posttraumatic psychological outputs, such as major depression, would be another important variable to access. Such symptoms can interfere with the ability of these witnesses to provide a consistent and coherent narrative account of their trauma experiences in the court. Therefore, it would be of high relevance if associations could be detected between the severity of trauma symptoms and of rated inconsistency of witness testimonies and ratings of credibility of the witnesses.

Because witnesses suffering from PTSD are particularly at risk to give inconsistent narratives about the traumas they suffered and therefore to be perceived as incredible, they must be interviewed with delicacy by skilled interviewers, who are able to build rapport. However, the courts often not recognize witnesses suffering from chronic psychological conditions. Furthermore, they may not be familiar with how witnesses’ symptoms and own possible unfavorable interviewer behavior may undermine the reliability of witnesses accounts. Additionally, law personnel receive virtually no psychological trainings in how to deal with the needs and issues related to such witnesses. However, more psychological research is needed to define what exactly constitutes rapport building and how lawyers and judges can implement it. In this connection it has to be noted that courts primary intent is not to deliver therapy and reconciliation but to focus on truth-finding. Psychological research in legal context is somewhat dedicated to the development and application of knowledge designed to promote positive interpersonal relations. Although the ultimate social function of law in resolving disputes is compatible with this, the law accomplishes this function by sharpening conflict. Judges and other legal personnel are to deliver their core objective, namely justice.

This sometimes involves interrogating rather than interviewing. However, psychological processes active in court need to be recognized and understood. If verbal rapport building was associated with more accurate witness testimony (which would be another interesting further investigation), justice could be better guaranteed when legal professionals in fact know how to verbally build rapport.

Finally, part of our aim was to use LIWC technology in order to analyze the investigative interviews in a swift and economic manner. Nevertheless, a qualitative investigation of differences in witness account could be useful for future research. Such an investigation would allow for a more complete explanation of the ways in which interviewers' interviewing behaviors contribute to differences in witnesses language use and would allow the analysis of categories beyond linguistic processes.

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Curriculum Vitae

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Education and Qualifications

2010 – 2012	Doctoral student at the Department of Psychology, Clinical Psychology and Psychotherapy, University of Zürich, Switzerland. Ph.D. thesis accepted in the Autumn Term 2012. Ph.D. thesis title: “Examining Investigative Interviews with Traumatized Witnesses in the Extraordinary Chambers in the Courts of Cambodia”. Advisors: Prof. Dr. rer. nat. Ulrike Ehlert, Prof. Dr. jur. Christine Kaufmann
2005 – 2009	Graduate School of Psychology, University of Zürich, Switzerland, Master Degree in Psychology. Master’s thesis title: “The Influence of Music Listening on the Endocrine Stress Response”. Supervisor: Dr. phil. Myriam Verena Thoma
2003 – 2005	Undergraduate School of Psychology, University of Zürich Psychology Major Social Anthropology Minor
2002 – 2003	Undergraduate School of Social Anthropology, University of Zürich Social Anthropology Major
1996 – 2001	Gymnasium at the Kantonsschule Wettingen, Switzerland

Employment History

August 2012 to November 2013	Clinical Psychologist at Rehabilitation Clinic Bellikon
October 2011 to present	Member of the psychotherapeutic team at the Outpatient Clinical Research Unit for Behavioral Medicine at the University of Zürich (Chair: Professor Ulrike Ehlert)
September 2010 to present	Student in the Postgraduate Advanced Master Program in Psychotherapy and Behavioral Medicine at the Department of Psychology, Clinical Psychology and Psychotherapy, University of Zürich, Switzerland

March 2010 – July 2012	Doctoral candidate, Department of Psychology, Clinical Psychology and Psychotherapy, University of Zürich, Switzerland (Chair: Professor Ulrike Ehlert)
January 2010 – February 2010	Data processing at Trans Tech Publications Inc., Stäffa, Switzerland
September 2008 to February 2010	Night shift caregiver in a home for mentally handicapped adults (Wohnstätten Zwyssigstrasse, Zürich, Switzerland)
June – November 2008	Part-time caregiver in the Wohnstätten Zwyssigstrasse
October 2007 – March 2008	Research practical in “Posttraumatic Stress Disorder and Social Perception” at the Institute for Psychopathology, University of Zürich, Switzerland
October 2007 to present	Reserve pool psychiatric employee at the Schützen Psychiatric Clinic
May 2007 to October 2007	Psychology practical at the Schützen Psychiatric Clinic in Rheinfelden, Switzerland
April 2006 to present	Swim teacher for mentally handicapped adults (Wohnstätten Zwyssigstrasse)
August 2006	Clerk at the computer department of the State Youth and Job Counseling Center, Zürich
Additional Work Experience	Office jobs including the Police Department of Zürich, United Bank of Switzerland, and the St. Johann School of Special Education in Klingnau, Switzerland Promotional and marketing activities at Promotion-tools, Zürich

Publications

Book Chapters

Brönnimann, R. & Ehlert, U. (2011). Traumafolgestörungen bei gefährdeten Berufsgruppen. In G. H. Seidler, H. J. Freyberger & A. Maercker. Handbuch der Psychotraumatologie. Stuttgart: Klett-Cotta.

Journal Papers (peer reviewed)

- Brönnimann, R., Marschner, L. (in prep.). The Challenges of Assessing the Evidence of Traumatized Witnesses in International Criminal Trials – A Case Study on the ECCC.
- Brönnimann, R., Müller, J., Horn, A., Herlihy, J., & Ehlert, U. (2013). *Linguistic Features of Rapport Building in Legal Interviews – Results from the Khmer Rouge Trials*. Manuscript submitted for publication.
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